TOMORROW'S RAILROADS: A DREAM THAT MUST COME TRUE

December 14, 1970

RAILWAY AGE

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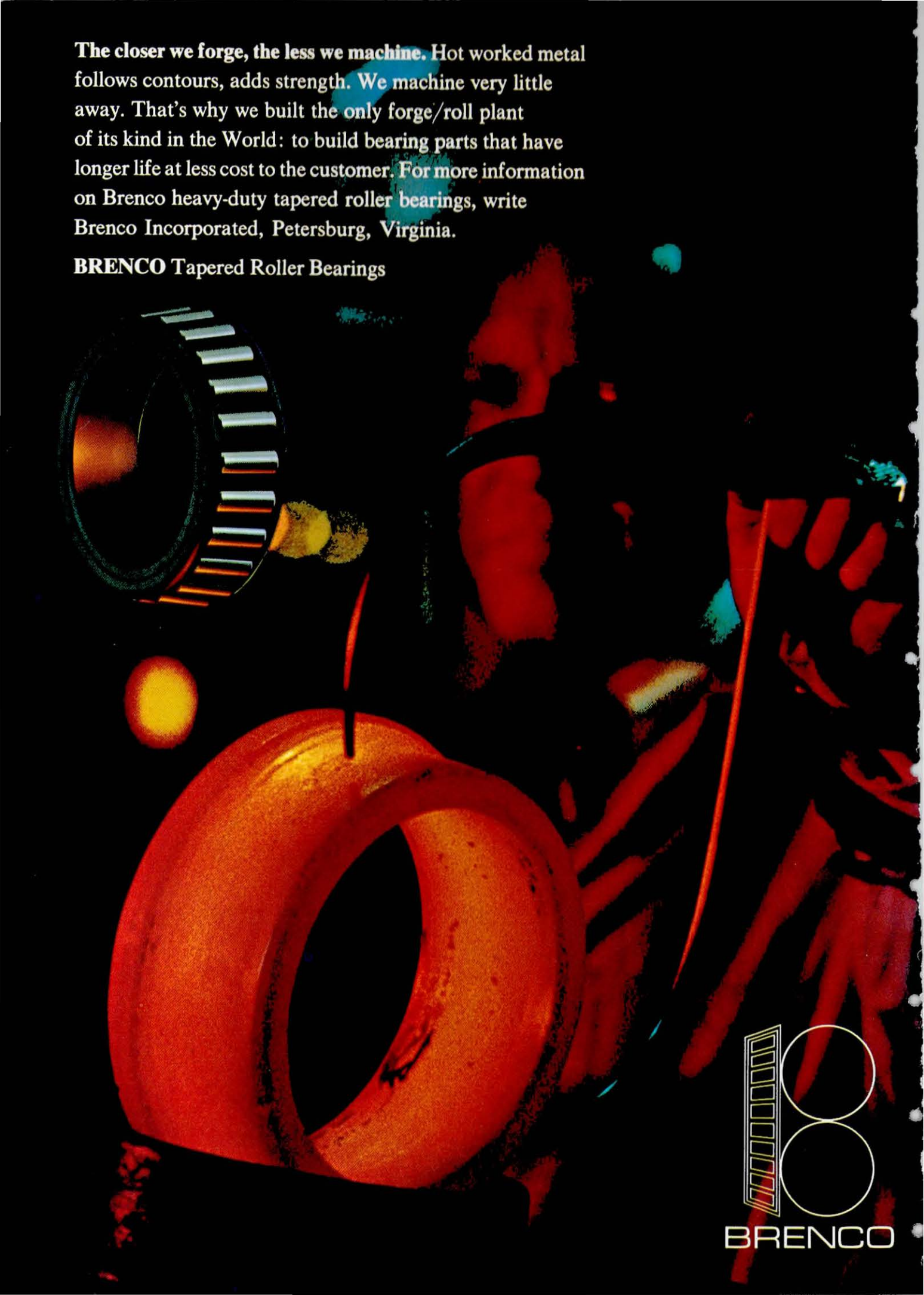

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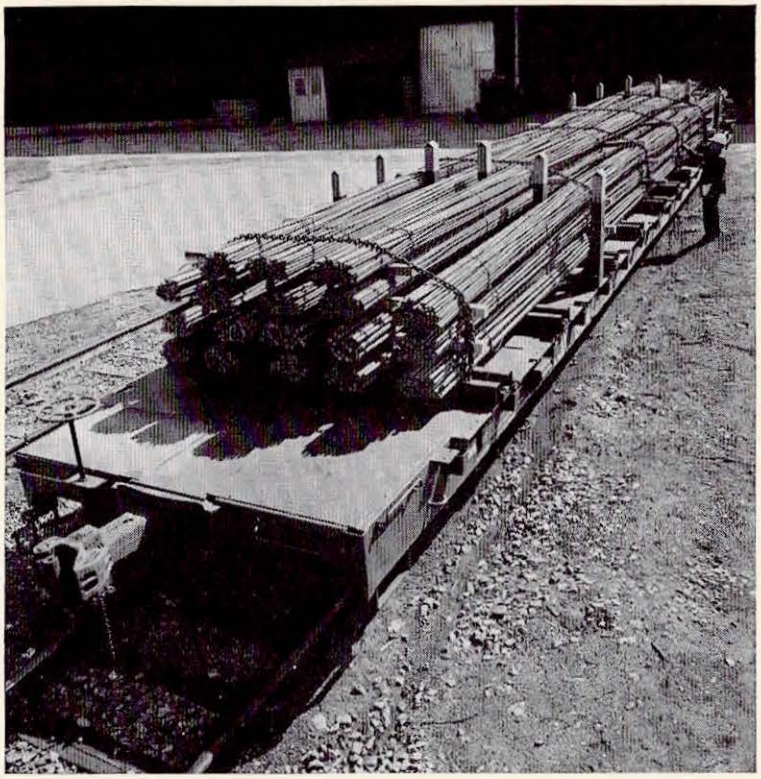

Here, for example, the car is shown equipped with removable finger racks and loaded with 60-foot steel reinforcing bars.

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Circle 3 on coupon page 53

RAILWAY AGE

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Inside

LUTHER MILLER

RAILPAX—OR RAILPOX?

For DOT Secretary John A. Volpe, these have not been the happiest of times. He saw the SST program go down to shocking defeat in the Senate. His Department's biggest agency, the Coast Guard, got involved in an international incident that riled the White House. And then there was Railpax.

Volpe had the task Nov. 30 of announcing preliminary routes for the Railpax trains that will start running next May 1. An essential and unpleasant part of this task was announcing where trains will *not* run. The resulting image for DOT's harried chief was more that of grim reaper than savior.

Assailing the "promise of profitability" yardstick that Volpe employed in deciding which trains would remain, the New York Times accused the Administration of joining bloody hands with the railroads in a "mercy killing."

Forbes Magazine found the Railpax scheme to be " a classic case of trying to treat a mountain like a molehill," and suggested that it all "looks more like a legal alibi to get both Congress and the ailing railroad industry off the hook" than anything else. Forbes made perhaps the most telling point of all in the pox-on-Railpax rhetoric when it pointed out that the $40 million the Federal government is granting Railpax is less than the U.S. spends every day on highways.

Railroad men have their reservations about Railpax, summed up by the wry comment of one chief executive, "It will be an educational exercise for the public."

Railway Age also has reservations; some of them are outlined on page 58 of this issue.

But Railpax, as it was described by Secretary Volpe at his Nov. 30 press conference, deserves a rather better hearing than it has been getting in most of the press. Washington Editor Reid Beddow's report beginning on page 26, is, we believe, the fullest and fairest that has appeared anywhere.

TRENTON UPSTAGES WASHINGTON

Another story in this issue casts the $40 million which Washington is investing in the future of U.S. intercity passenger-train service in an interesting (and shabby) light. In their cover story, "New Jersey equips its railroads for the '70s" (page 22), Fred Houser and Bob Bartley point out that this one state has invested $26 million of its own funds in new cars and locomotives for one of its railroad commuter lines. Maybe The Times and Forbes have a point. Just think what could be accomplished—in terms of new equipment alone—if Washington attached the same importance to the comfort and convenience of the 105 million people Railpax will serve that Trenton attaches to the well-being of the 14,000 riders who use Erie Lackawanna's locomotive-hauled lines.

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Short and Significant

THE GOVERNMENT

SINGLE REGULATORY AGENCY?

Merger of the ICC, FMC, and CAB into a single regulatory agency is both "feasible and desirable," said AAR President Thomas M. Goodfellow at a TAA seminar in Washington. Other modal leaders either opposed or were lukewarm about the idea. Water Transport Association President John A. Creedy proposed instead the creation of a "judicial court of transportation review," designed to reduce the time lag between legislation and its regulatory and judicial interpretation. In any case, the Administration has adopted a wait and see attitude.

TOTAL TON-MILES CLIMB TOWARD TWO-TRILLION

U.S. domestic transportation carried 1,898.2 billion ton-miles in 1969 with all modes achieving record highs, reports the ICC. The total ton-mile estimate was 3.2% higher than the 1,838.7 billion carried in 1968. Ton-miles carried by rails increased 3.1%; highway ton-miles, 1.9%; waterways, 2.9%; pipelines, 5%, and airways, 10%. Although the 780 billion ton-miles carried by rails was the highest in history, the rail portion of the total decreased slightly from 1968 to 1969: 41.16% to 41.09% respectively.

THE INDUSTRY

ANSWER TO NATIONALIZATION

SP President Benjamin F. Biaggini will answer AFL-CIO President George Meany's recent pop-off in favor of nationalization of U.S. rails at a good forum: Washington's National Press Club. In a Dec. 14 speech there, Biaggini, in the first industry response to Meany, will explain why nationalization, far from curing rail ills, might only exacerbate the patient's symptoms. He will also plug hard for legislation enacting the industry's ASTRO proposals. Meany's remarks have already drawn criticism from the Transportation Association of America and the Chamber of Commerce of the United States.

FLANNERY MOVES FROM PC TO WP

Robert G. Flannery has resigned as executive vice president of the Penn Central effective Jan. 1 to go to the Western Pacific, where he will have the same title. PC President William H. Moore said Flannery's resignation "came as a complete surprise to me." Moore added: "He has done a fine job for Penn Central. We hate to lose him and we wish him well in his new assignment." Former PC President A. E. Perlman is now WP president.

CAR MARKET STILL SLUGGISH

Freight-car orders recovered slightly in October, but not enough to halt the declining backlog. Orders totalled 3,053, but 4,675 new cars were delivered with the result that the backlog of new cars on order Nov. 1 dropped to 20,049, compared with 21,672 a month earlier and 42,043 a year ago. In this year's first 10 months, new-car orders totaled 33,464, compared with 67,648 in the comparable 1969 period. The decline is attributable not only to generally bad economic conditions, but also to the prospect of less costly financing next year if efforts to win government backing for equipment loans are successful.

TRANSIT

WMATA REVERSES ITSELF ON "BUY AMERICAN"

Five weeks after it had re-imposed its "Buy American" rule, the board of directors of the Washington Metropolitan Area Transit Authority on Dec. 3 voted 5 to 1 to drop it. Faced with court challenges of the rule, under which a foreign firm had to underbid a domestic supplier by more than 15% to receive a Metro contract, WMATA felt that prolonged litigation would incur costly construction delays. If a "Buy American" procurement policy is again imposed, say WMATA sources, it is likely to be based on a 6% underbid.

ROHR SEES SOARING TRANSIT MARKET

The Rohr Corp., an aerospace firm that won the prime contract for the BART transit cars, forecasts that non-aircraft products will account for half the company's volume by 1975. Says President Burt F. Raynes: "We see a tremendous market potential in mass ground transportation and we are directing our effort at this demonstrated and recognized national need. The fact that President Nixon recently signed a transportation bill increasing tenfold the Federal funds available for this [means] the market is going to be there."

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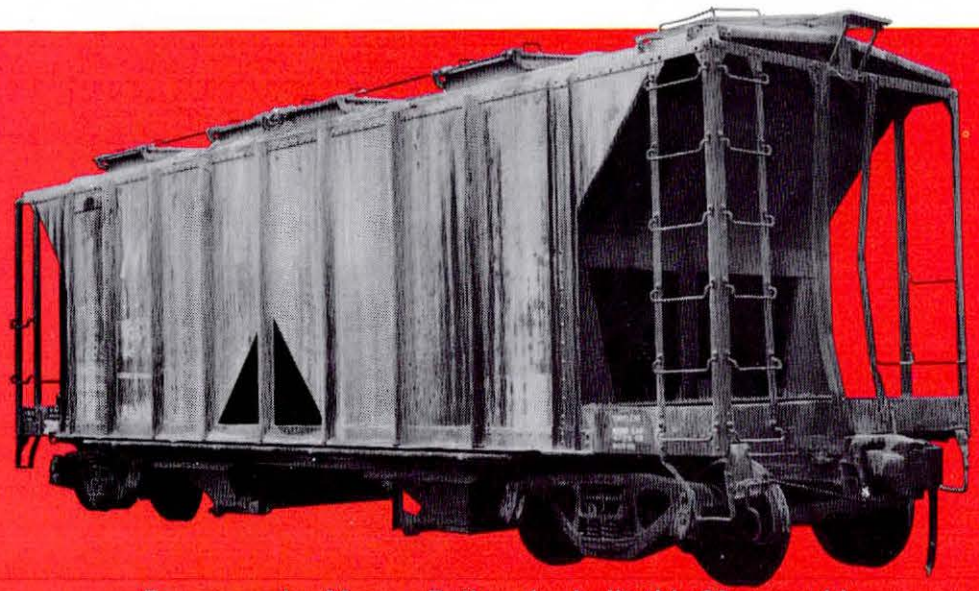
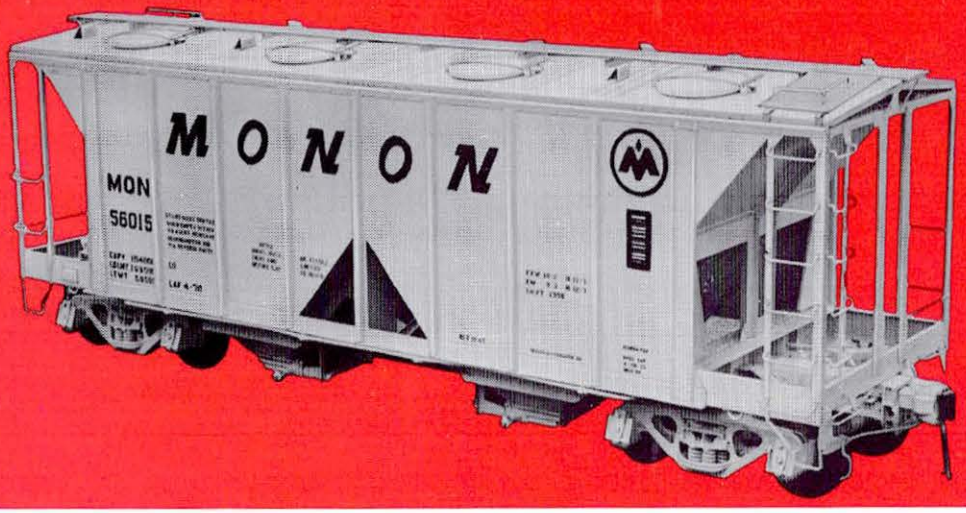


For example, Monon Railroad rebuilt this 20-year old square-hatch car with a Stanray round-hatch roof, a coat of paint and put it back in service, better than ever, at a great savings in time and expense.



Aside from the obvious savings incurred in rebuilding existing cars versus buying new ones, Stanray roofs can even make the rebuilding more profitable.

First of all, our roofs are corrugated. This corrugated design eliminates need for reinforcements. It also means lighter weight and a minimum of assembly work. Another way you save with Stanray is on long range protection. Our integral round-hatch roofs have an extremely low design which deters buildup of corrosive materials around the hatches. So, they'll hold up better over the years than the old-fashion high standing square-hatch roof.

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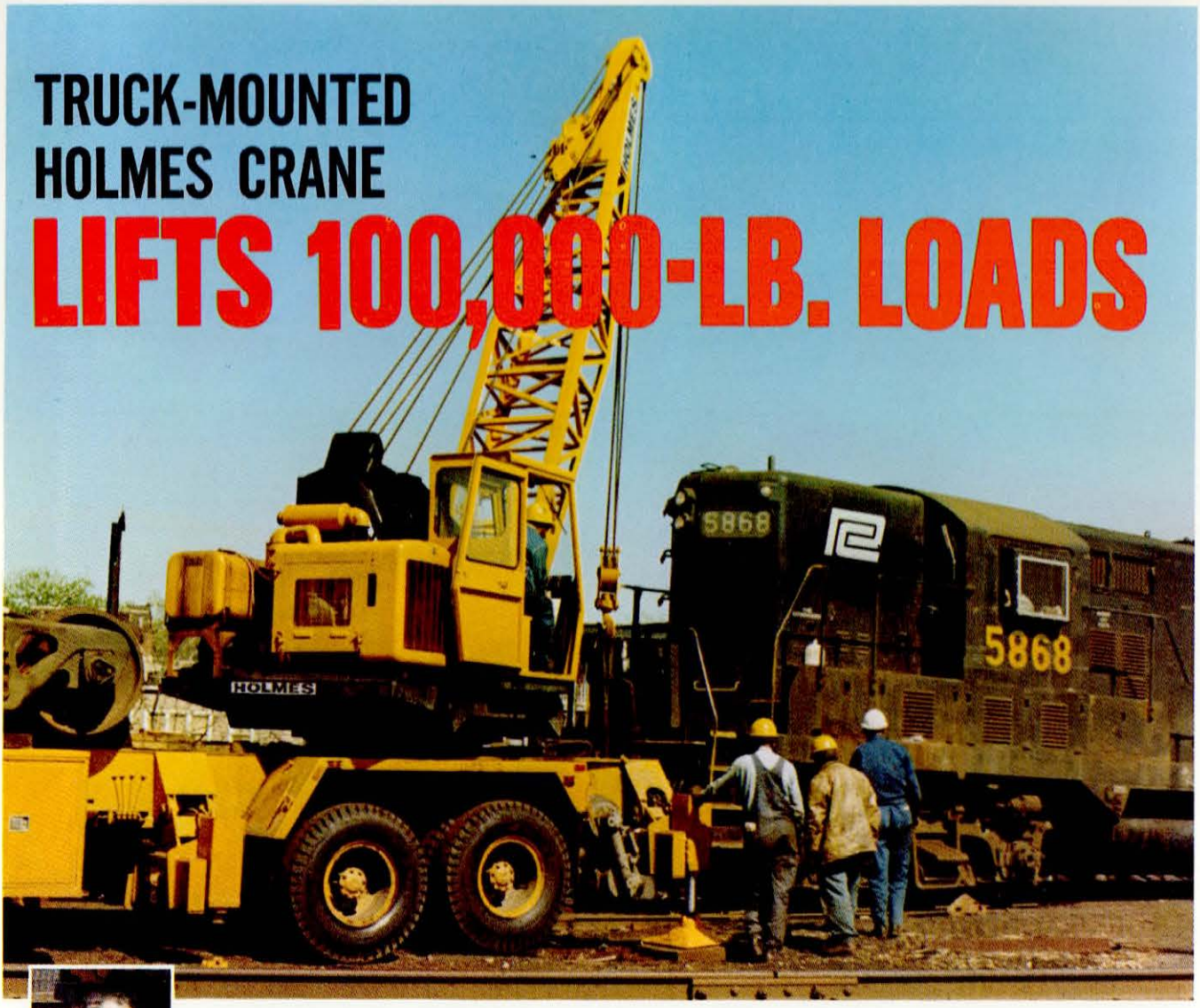

11 units now working for Penn Central . . . cutting costs!

Reported by William G. Pugh, General Car Department Foreman at Penn Central's 59th Street Yard in Chicago.

". . . when you've got a humping yard making up 8 trains a day . . . and 725 miles of track to cover . . . derailments can happen . . . often 100 miles away," Pugh said.

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RAILWAY AGE NEWS

Traffic research needs high priority

A major research challenge facing the railroad industry is identifying new opportunities for obtaining additional traffic. Dr. William J. Harris, Jr., AAR vice president, research and testing, assigned this search highest priority on two recent occasions—at the Transportation Research Forum in Chicago and at the meeting of the Rail Transportation Division of the American Society of Mechanical Engineers in New York.

Already "funded in a modest way," says Dr. Harris, are attempts to focus attention on development of new markets for rail service. Interaction with other modes is an important phase of such efforts.

In the fields more traditionally associated with AAR research, there are many where little progress has been achieved for many years, Dr. Harris noted. He cited, as one example, the metallurgy of rail, where "there has been no significant development since the middle '30s." A look is now being taken at vacuum degassed steel as a possible means of eliminating a need for controlled cooling of newly rolled rails. The cooling boxes used in temperature control impose limitations on the lengths to which rails may be rolled.

Dr. Harris has commended the tank-car industry for the interest it has shown in improving the post-derailment safety performance of tank cars. He adds, however, that this industry action comes about two years too late, since other agencies have now entered to solve the problems. Many facets of the tank car quandary are being investigated including shell strength, safety relief devices, and the resistance of tanks to intense heat. Wheels also must come in for new attention, Dr. Harris added.

Another major area of concern is track/train instability. He called attention to the DOT research facility near Pueblo, Col., saying it probably will be capable of producing answers to only a fraction of the total problems involving wheel/rail relationships.

While railroads have been spending $50 million annually in environmental control, involving activities such as tie disposal, brush removal and treatment of effluent from diesel shops, much more will have to be done. Now statutory limits on the emission from diesel engines cover only highway vehicles. If this is expanded to cover railway propulsion plants, a severe problem could arise. Harris observed that the Federal standards on automotive emission which will be effective in 1975 are "beyond the state of the art." He warned that it is important to fund research on the products of diesel combustion, presenting results in a form which will convince the public of the great efficiency with which energy is transformed and utilized by the rail mode.

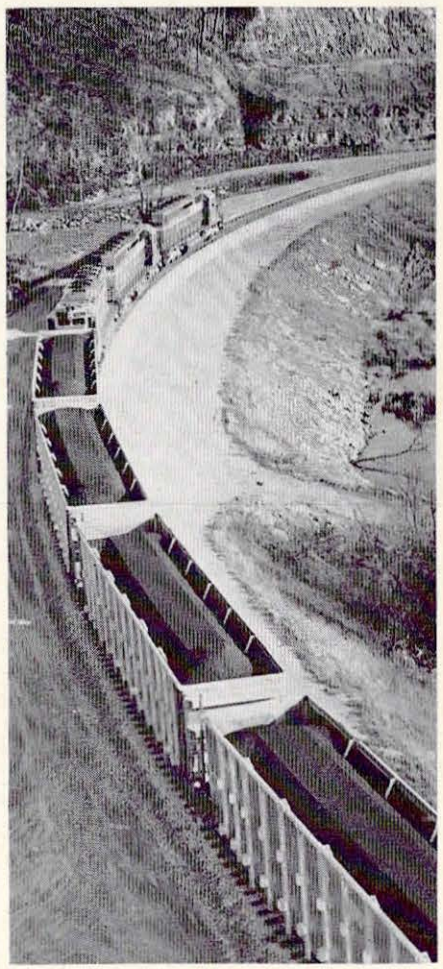
There was a time, said Dr. Harris, when railroads constituted the "cutting edge of technology." But conditions have changed. In Great Britain, he said, railroads have drawn research talent from the aerospace industry and these technologists are now making a real contribution to the railroad research effort.

Equipment firsts north of the border

An experimental 100-ton aluminum covered hopper car and North America's first 4,000-horsepower production diesel locomotive have rolled out of the shops of Canadian builders. CP Rail will put the six-axle M640 unit, built by MLW Industries, in high-speed freight service.

Canadian National is beginning the testing of five of the experimental hopper cars built by Hawker Siddeley Canada. Basic design of the car follows a concept introduced in 1959 by the Aluminum Company of Canada. The 70-ton 1959 design has since become a standard on many railroads in Canada and the U.S.

The CP Rail locomotive is powered by a newly designed 18-cylinder Model 251 engine based on 16-cylinder units.



Detroit Edison train makes its first run

The Detroit Edison unit coal train operation which will eventually move eight-million tons of West Virginia coal annually to a power plant complex in Monroe, Mich. (RA, June 8, p. 34), has now made its inaugural run. Like the 17,000 tons of coal which it hauled, the entire train—five diesel road locomotives and 144 aluminum gondolas—is owned by Detroit Edison. Penn Central operates the trains. When the Monroe power station reaches its planned capacity in three years, a total of four unit trains requiring 588 cars and 22 diesel locomotives will be operating out of the Blackville mines in northern West Virginia.

NEWS

Milwaukee expands TOFC/COFC facility

Trailer/container business in Seattle is growing—and so is Milwaukee Road's ability to handle the growth. Milwaukee has now completed an expansion of its Stacy Street Intermodal Yard which doubles the capacity of the facility. Stacy Street now has two 1,800-foot loading/unloading tracks, served by a Piggy Packer, and a trailer/container storage area with space for 200 units. During the first nine months of 1970, Milwaukee showed a 100% increase in import/export container traffic through Seattle, and a 45% increase in import traffic moving through the intermodal yard in piggyback trailers loaded at the port.

C&O/B&O cut cost of moving housing

Chesapeake & Ohio/Baltimore & Ohio have completed tests demonstrating the feasibility of moving modular houses by rail at a substantial reduction in handling costs for manufacturers. Testing, conducted in cooperation with Boise Cascade, a leading builder in the rapidly expanding modular housing field, utilized a new method of loading pioneered by C&O/B&O.

Erie Lackawanna has previously handled Stirling Homex modular housing units from Avon, N.Y., to Akron Ohio, and, in cooperation with Southern, from Avon to Corinth, Miss.

Results of C&O/B&O tests were followed closely by the U.S. Department of Housing and Urban Development. Transportation is a key factor if full use is to be made of modular home units in solving the nation's housing shortage.

C&O/B&O developed a side transfer unit which makes a crane unnecessary for loading and unloading. The motorized flatbed trailer is specially equipped with pneumatic arms to slide the prebuilt houses on and off flat cars. Graphite is used to grease the steel bolsters over which the 38- by 12-foot housing units are pushed into position.

The test run was from a Boise Cascade plant in Baltimore to a privately owned development area in Oakland, Md. where a number of town-house apartments fashioned from modular units are now being developed. The units moved by C&O/B&O came with plumbing, wiring and heating facilities complete. The roads' marketing specialists and engineers have been working for some time to develop new techniques for transporting housing units by rail.

New restructuring for ATSF and SFI

Santa Fe Industries and Santa Fe Railway are making another corporate restructuring move, in which non-rail subsidiaries of the railway (itself an SFI subsidiary) will become subsidiaries of Industries. Companies affected are Chanslor-Western, Santa Fe Trail, Haystack Mountain, Santa Fe Pacific and Standard Office Building. Los Angeles Junction and Produce Building of Houston, two companies associated with rail transportation but formerly owned by a non-rail subsidiary, are being transferred to Santa Fe Railway.

UP will oppose C&NW employee sale

An old antagonist, Union Pacific, is the only major entity thus far to stand up in apparent opposition to plans for Chicago & North Western employees to buy their railroad. In asking the ICC to hold hearings on the proposal, UP alleges that the sale application was not properly filed and that the plan violates the Clayton Act. UP is also questioning the viability of C&NW under its proposed new ownership. For years, now, UP and North Western have been at odds before the Commission in the Rock Island merger/control case.

NARUC seeks more state control of rates

A resolution calling for amendment of the Transportation Act of 1958 as it involves intrastate freight rates has been adopted by the National Association of Regulatory Utility Commissioners. NARUC's proposal would give state commissions primary jurisdiction over intrastate rail rates, requiring that roads first seek clearance with them before appealing to the ICC. It was not until late 1969, according to NARUC, that railroads began petitioning ICC directly for higher intrastate rates, eleven years after the Transportation Act became effective.

Commerce forecasts rail spending drop

The U.S. Department of Commerce is now forecasting that railroad capital spending will be at the rate of $1.56 billion annually in the first quarter of 1971, compared with an annual rate of $1.76 billion in first-quarter 1970. The Commerce survey estimates rail capital outlays for the full year 1970 at $1.83 billion, compared with $1.86 billion in 1969 and $1.45 billion in 1968. These estimates include not only direct outlays by Class I roads but leased equipment and private carline acquisitions as well. (Capital-investment statistics are based on installations of equipment, not on new but undelivered orders—thus part of the 1970 figure derives from orders placed in 1969.)

Tunneling nears end for BART subways

All construction for the Bay Area Rapid Transit District requiring tunnel boring machines for subways in San Francisco and Oakland has been completed, according to Parsons Brinckerhoff-Tudor-Bechtel, engineering construction manager for BART. Last of the 18-foot-diameter, 120-ton boring "moles" came out of Market Street in San Francisco on Nov. 22, after the completion of the tunnel between Powell Street and Civic Center Stations.

Timken "AP" wins 1-A status from AAR

Unconditional approval for the Timken AP freight-car roller bearing has been granted by the AAR. The new status, represented by Certificate 1-A, is the first such clearance given a roller bearing by the AAR's Mechanical Division. From 1954 when the AP was introduced, installations have been made on more than 400,000 cars in 100 nations. AAR procedures had earlier granted the Timken bearing conditional approval following appraisal at the AAR Research Center.

Lines on Labor

GUS WELTY

LABOR'S ROLE IN MERGER

All railroad mergers are not created equal —nor, by any means, are the labor agreements involved in those mergers. Back in the early days of Penn Central, for instance, a top PC officer was asked: "Are your merger-labor agreements something you can live with?" PC's man said "yes." But perhaps the real answer lay in the fact that, as he replied, he nervously lit the wrong end of a filter cigarette. The same question has been asked of Burlington Northern people (RA, July 27, p. 20)— and the "yes" comes back firmly, and with no give away show of nerves. Most recently, it was BN President Louis W. Menk who talked about BN's agreements—and the significant ways in which they differ from PC's.

BN GETS FLEXIBILITY—AND A "SPIRIT OF COOPERATION"

BN's labor-agreement goals could be summed up in a word: flexibility. But Lou Menk says, "we did not kid ourselves. To obtain this freedom from union restraint, we were prepared to grant employees a package of protection benefits without precedent in all American industry." BN's efforts, he adds, "were rewarded with a spirit of cooperation. . . . Most of our labor-agreement objectives were achieved, and we were ready to go on M-Day."

BN AND PC: THERE ARE OBVIOUS CONTRASTS

BN's president sees three areas of difference between his road's agreements and those of Penn Central. On employee transfers, for instance, a PC worker could elect to move or he could take a separation allowance equal to as much as 17 months' pay. At BN, if an employee agrees to move, "he is rewarded with pay and reimbursement of expenses related to moving." If he declines transfer, his rights and benefits are suspended, and there is no option for severance pay. A second difference involves elimination of union restraint on integrating operations. PC agreements provide for future negotiation, and if necessary, ultimate arbitration of each individual merger change—as it occurs. BN and its unions had this job done in advance of M-Day. Finally, Menk notes, on PC each crew member is covered by his own agreement and thus "a single crew may operate under several different and conflicting agreements. Management must meet the most restrictive provision of these agreements for each phase of operations." A result has been "difficult train- and yard-service operation." BN, by contrast, has negotiated new basic agreements covering most non-ops. With the ops, "only one set of pre-existing agreements applies to any single operation, and this has resulted in a better, more economical operation." For both PC and BN, the employee-benefit cost was substantial—but BN seems to have gotten something substantial in return.

NEWS

Another delay hits RI merger decision

Rock Island and its intended merger partners might be pardoned for wondering "What next?" Because in addition to the "normal" delays in a merger case, this one is also taking a toll of the ICC examiners. When hearings began, years ago, Paul C. Albus was the examiner assigned. He suffered an injury, and the Commission put Nathan Klitenic on the case to keep the hearings going. Albus returned to the scene, but subsequently retired. Klitenic kept at it, and in July he issued a summary report which generally favored RI/Union Pacific merger and sale of RI's southern properties to Southern Pacific. Then, earlier this month, with the final report still unissued, Klitenic suffered a heart attack. He's recuperating. But nobody's sure, now, just when the full word on RI will be coming.

The merger plan has been fiercely contested, involving as it does extension of UP's lines from Kansas City and Omaha to Chicago, Minneapolis—St. Paul and St. Louis. Chicago & North Western has been a major beneficiary of UP interline movements.

BN opens line with a 7-mile tunnel

A 60-mile, $110 million line-change project, under way since 1966, was officially completed with the operation of the "first train" over the new line and the "last train" over the old line.

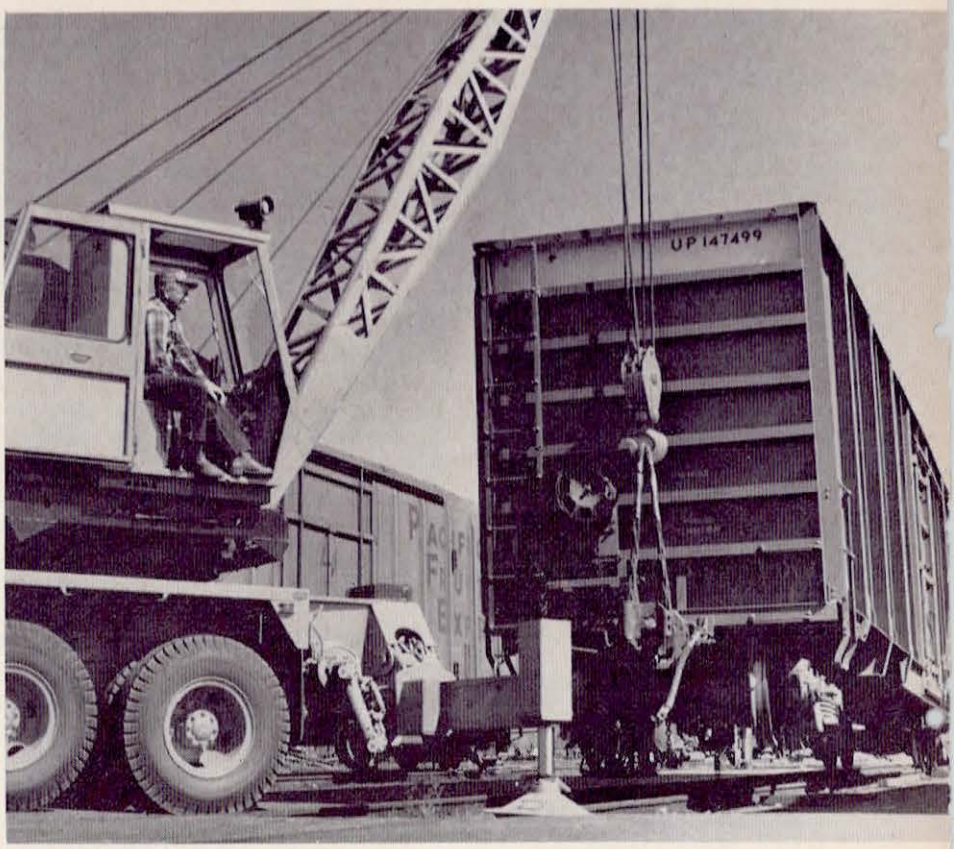
The new line was constructed in Montana to replace a portion of burlington Northern's main line that will be flooded by waters backed up by government-built Libby Dam.

Fourteen miles shorter than the old route, the new line also has considerably less curvature than the line it replaces—but the ruling grades are steeper. A notable feature is the 7-mile-long Flathead tunnel through Elk Mountain, second only in length in the Western Hemisphere to the 7.79-mile Cascade tunnel, also on Burlington Northern.

In the dedication ceremonies, representatives of the railroad, the Army Corps of Engineers and the various contractors participated in a ceremony at Libby. In a symbolic transfer of title, Brig. Gen. Roy S. Kelley, representing the government, presented a silver-plated switch key to BN Chairman John M. Budd. The dedication party then boarded the special train for a four-hour trip, looping first over the new line and back onto the old.

Construction of Libby Dam was started in 1966 and is scheduled for completion in December 1972. During construction of the new line, trains operating on the old tracks have been going through a hole in the dam. That hole will now be filled, the old tracks removed and the filling of the reservoir started.

Although the new line is shorter than the original route, the cost of operating it is expected to be substantially higher due to the steeper grades, the cost of maintaining the tunnel and the expense of keeping the line open during snow.



Truck cranes aid UP operations

Five heavy-duty, truck-mounted cranes have been placed in service on Union Pacific, supplementing the road's fleet of conventional wrecking cranes. The new 100,000-lb-capacity units, built by Ernest Holmes Co., are equipped with retractable wheels allowing them to operate over either rails or highway. This versatility enables the crane to reach a detailment scene using the most expeditious route. One unit is assigned at UP's new Bailey Yard at North Platte, Neb., where General Car Foreman Vaughn Berry reports that "In a yard as large as this and with the high volume of traffic, we need a lift for shifting cargo, putting new wheels under cars and rerailing others." UP has cranes at Kansas City, Salt Lake City, Los Angeles and Portland.

Pan Am proposes "Metroflights"

Pan American World Airways has asked DOT to underwrite a $5-million helicopter demonstration project between Washington, D.C., and New York and Boston.

The Project would seek to prove the practicality of helicopter passenger service between the cities, although only mail and project consultants would be carried the first year. Pan American labeled the service "Metroflight," a name similar to the rail Metroliner passenger service operated by Penn Central.

There is a further similarity in that the helicopters are manufactured by the Sikorsky Division of United Aircraft Corp., which makes the Boston-New York Turboliner trains.

Pan Am estimates its Metroflights could operate eight hours a day, five days a week, each chopper carrying a maximum of 42 passengers. The Washington to New York run, which would take one hour and 12 minutes, would cost $32, compared with $24 on Eastern Airlines air shuttle and $17 on the Penn Central Metroliner.

C&O/B&O map big equipment program

The affiliated Chesapeake & Ohio/Baltimore & Ohio have so far authorized equipment outlays for 1971 totaling $83.9 million. Additional authorizations are anticipated. In the entire current year, the two roads are spending about $100 million for new cars and locomotives (see p. 55).

C&O has already placed with Bethlehem Steel an order for 2,000 100-ton coal hopper cars costing $27 million. This is in addition to 2,100 similar cars being built at C&O's Raceland shops. C&O will also acquire 35 new diesel locomotives costing 9 million. C&O and B&O together are buying 86 cabooses from International Car for $2.4 million.

B&O will acquire 65 new diesels at a cost of $17 million and 104 60-ft box cars at a cost of $2.5 million. Suppliers of the locomotive and box cars have not been announced.

Watching Washington

REID BEDDOW

THE TRUCKERS AND ASTRO

What will be the attitude of truckers to the railroads' ASTRO program? This is a question that is a matter of deep concern to many rail men, both at the AAR and within individual railroads. It is also vexing the truck operators themselves, and, in particular, the staff of the motor carriers' Washington lobby, American Trucking Associations.

Railway Age has learned: (1) The ATA staff is at this moment assembling position papers on the 30-odd suggestions and proposals contained in ASTRO; (2) ATA President William A. Bresnahan and his top aides will review the position papers and prepare the ATA staff's recommendations to the ATA executive committee for final and official policy determination in late January.

Railway Age also has learned that if rails wish to enlist some measure of cooperation or understanding from the truck operators on the legislative proposals contained within ASTRO, it would behoove them to make the first overture and a direct one. The truck men want to be wooed. Like rail men, they are a proud lot. Further, any courting ought to be done before ATA formulates a rigid policy in January.

A LONG HISTORY OF BAD BLOOD

No reader needs to be told of the historic rivalry between rails and trucks. This rivalry is a fact, and both sides can cite chapter and verse of alleged slights and worse. The rivalry has been decried by many—for instance, William G. White, President and Chairman of Consolidated Freightways, Inc., the nation's largest trucking company, and a former officer of the Erie Lackawanna (RA, June 2, 1969, p.20).

Any compromise will not be easy. There are legitimate disagreements over common ownership, deregulation, and diversion of highway trust fund monies. The legacy of bitterness will not die easily, and it is not helped by rhetoric as usual (the immediate past president of ATA called ASTRO "a letter to Santa Claus").

Actually, a sort of tacit cooperation already exists between the two modes in some respects. The truckers opposed no particular rail bill this session of congress—neither the rail loan guarantee plan, the safety bill, or RAILPAX. Indeed, both modes strongly supported the discriminatory taxation bill. Similarly, rails collectively took no lobbying position against the truckers' cherished increase in sizes and weights of trucks last year. Some observers are now suggesting that negotiating quid pro quo could be actual rail support for increased truck sizes and weights in 1971.

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NEW ISSUE

December 2, 1970

$20,000,000

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Due December 15, 1985

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Equal-tax bill bites the dust

If there was one bill—one further bill—rails wanted passed by Congress this year, it was the measure that would have made it unlawful for states and local governments to assess property owned or used by interstate carriers at a higher rate than other property in the tax district.

This so-called discriminatory taxation bill was supported by the Johnson and Nixon Administrations and, by regulated carriers. The Senate passed it last January.

Even as late as a month ago, the bill, which the AAR estimated would save rails more than $60 million annually, was given a 50-50 chance of passage by the House.

It bit the dust hard in the closing days of the 91st Congress, when consumer advocate Ralph Nader unexpectedly opened fire. The House Commerce Committee promptly shelved it.

Nader, in a last minute appeal to the House Commerce Committee, said the bill would entitle rails, truckers, buslines, and pipelines to undeserved tax relief that would cost local taxpayers some $500 million a year.

He said the bill's principal clause, which would allow carriers to receive the lowest possible rate in any jurisdiction, was "a tremendous loophole in districts where certain companies . . . extracted severe tax concessions years ago."

"In effect," Nader continued. "the small taxpayers, the homeowner, and small businessmen will be subsidizing" carriers. He called for new hearings, and said previous hearings had taken "absolutely no testimony" on the total cost to state and local governments.

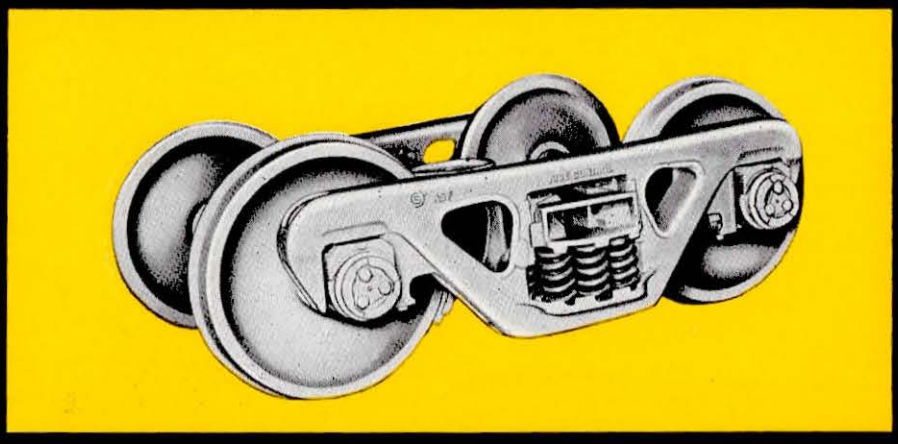
Rails were chagrined by the outcome. Their argument is different from other carriers. Rails say that although they pay local taxes on rights-of-way, their competitors do not—trucks use Federal highways, barges use untaxed waterways, and airlines have free sky.

Paying annual property taxes of $300 million a year aggravates their critical financial situation, rails say.

Let no one think these local taxes do not influence Congressmen. The Penn Central alone has had to defer payment of $58 million in local taxes, and the jurisdictions owed—school boards, small towns, even cash-short New York City—are screaming for payment. Sen. Vance Hartke (D.-Ind.) even suggested that Penn Central suspend payments on equipment trust certificates, which cost the road about $500,000 a day, in order to pay local taxes.

EASY RIDER!

FAMOUS ASF RIDE CONTROL® TRUCKS



The smoothest riding truck in the railroad field. A matching of ASF's high quality Side Frames and Bolsters in combination with long travel coil springs and built in friction control. Few parts, generous friction surfaces, low unit pressures and friction plate lock bolts insure long life and trouble free service. All this provides the maximum in safety and performance under all operating conditions.

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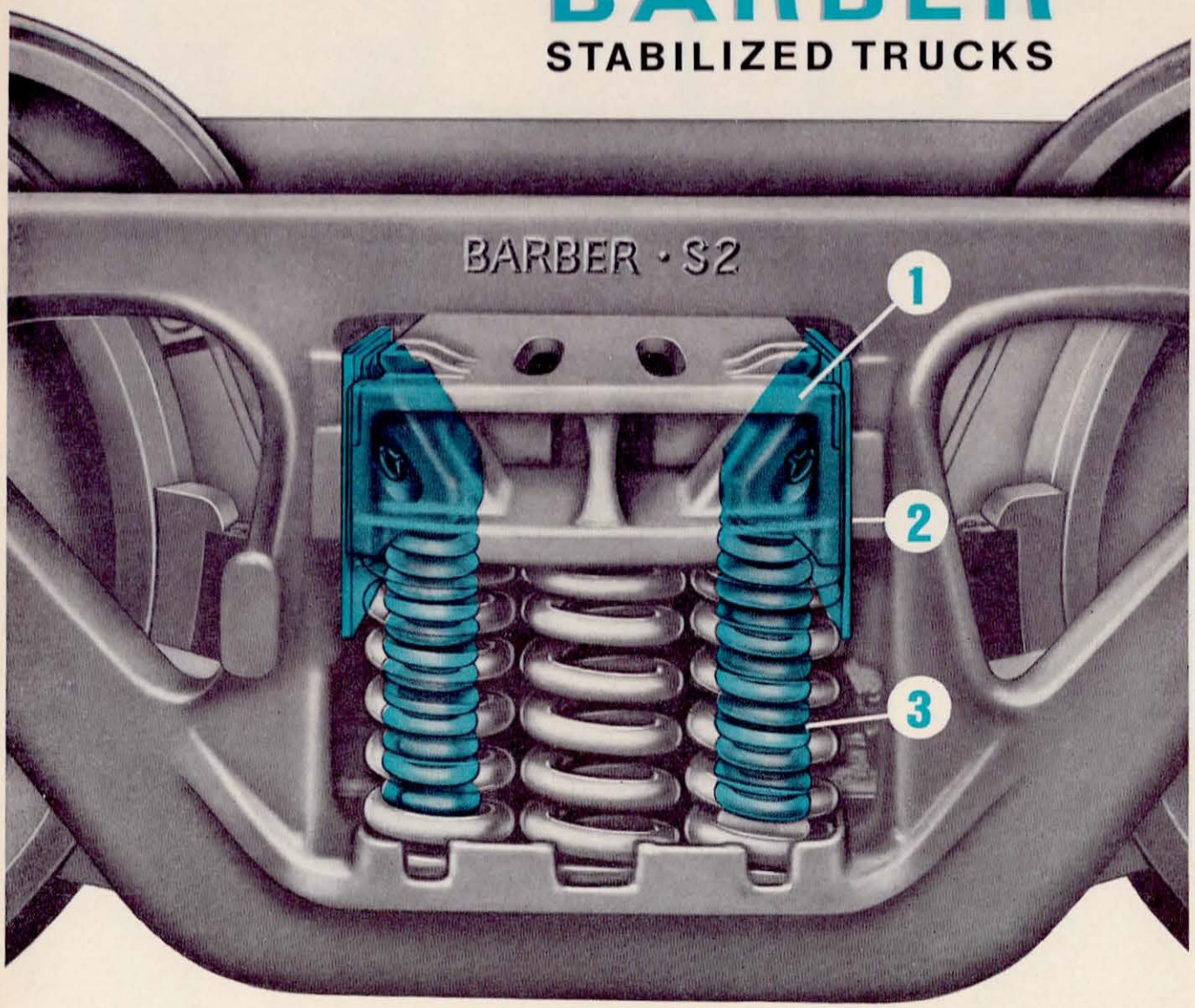

1 THE BARBER FRICTION SHOE—an extremely durable iron-alloy casting with large bearing areas.

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3 THE BARBER PRELOADED SPRING—single or double—actuating support for the friction casting.

Specify BARBER research, design, engineering and experience. Get low initial cost, lower maintenance cost, maximum control and long service life.

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5429

Circle 6 on coupon page 53

TOMORROW'S RAILROADS IN ACTION

A dream that must come true

By GUS WELTY, Senior Editor

The biggest sin the railroads have committed is that they grew old.

Railroads today are an older generation without pension, without social security, without medicare—without any of the things that are supposed to make old age tolerable, if not enjoyable. Railroads today live by their wits—and the brainiest of railroads can go only so far and do only so much.

Fifteen years ago, John W. Barriger wrote a book called "Super-Railroads for a Dynamic American Economy." Two years ago, Railway Age began a year-long series called "Tomorrow's Railroads." A year and a half ago, American railroads, with an assist from the government and the public, held a 100th anniversary Golden Spike Ceremony in the wastelands of Utah.

There is no real connection among these three occurrences—except that JWB's thesis has largely been ignored, the Railway Age series now has a somewhat hollow ring, and the promise of Promontory has given way to the failure of Philadelphia.

What happened? More important, what happens next?

History gives a lot of clues as to what happened—but so few as to what may now come to pass.

Go back, sometime, and read the Weeks Report, or the

"No consideration of tomorrow's railroads can now get far without consideration of ASTRO"

Doyle report or the evidence developed in the late 1950s before a Senate subcommittee headed by George A. Smathers. The problems faced by the rail-transportation medium today were clearly outlined in many yesterdays. But nobody paid heed, and now it's too late to worry about yesterday.

The problems faced by the rail-transportation medium today are rather clearly outlined in the ASTRO report. It remains to be seen whether anybody will pay heed this time—before it becomes too late even to worry about tomorrow, and tomorrow's railroads.

At this point, a lot of things matter not.

It is of no importance, for instance, whether the Interstate Commerce Act was passed to protect shippers from predatory railroads, or to protect one predatory railroad from another.

It just does not matter that certain of the early railroad managers were well-dressed thieves and robbers, or that much of 20th-century railroading fell into the hands of caretaker management.

It is of little interest to note—or to claim—that rail transportation capabilities helped to win World War II for the Allies.

Today is new, and tomorrow newer. And it is not even a "what have you done for me lately?" world, not any more. Now, it is a "what can you promise me?" world. And railroads are not really measuring up.

No consideration of tomorrow's railroads can now get far without consideration of ASTRO—and while ASTRO is an excellent documentation of the railroad problem and what ought to be done about it, its form does not permit documentation, with sufficient force, of the fact that railroads are not skidrow bums standing around with a hand out. ASTRO does not document, with sufficient force, the fact that railroads are doers—doers who, for one thing, are spending millions and hundreds of millions of as-yet-unearned dollars in an effort (call it even a desperate effort) to provide service people will buy.

Every natural foe of the industry has picked this up. ASTRO has been called a grab-bag, a letter to Santa Claus. ASTRO has had a syllable added: ASTROnot, or ASTROnaught. Railroad dilettantes—who might be expected to lend some support to railroading—seem more devoted than ever to (1) looking back, or (2) offering advice which, even if it were good, will never be their responsibility to execute.

But to get back to the original questions: What happened? And what happens next?

"What happened?" is a lot of things.

Railroads, to put it most simply, just gave out. All the weaknesses of the "system" were masked, during a period of economic growth. But after two or three setbacks, economically, in the post-war era, the industry just wasn't up to another one.

At the same time, there was the labor-cost factor. Technology seemed to be making railroads more efficient, productivity indices went up, and railroads were doing far more ton-mile work with fewer and fewer people. The problem was two-fold: (1) Labor costs, fed by inflation, kept rising, and (2) efficiency, in the modern-railroad sense, was a thing that fewer and fewer customers seemed interested in buying.

Finally, there was an almost total lack of regard for railroad—or transportation—problems on government's part throughout the 1960s. It did not much matter who was in charge, Democrat or Republican—and it did not help, either, that the industry itself spent the '60s in (1) silent appreciation of a buildup that lasted till after mid-decade, and (2) more-or-less silent complaint when things started going wrong thereafter.

Now, there does seem to be some realization—on the outside—of the railroad problem. But there are ironies, and contradictions still. One example: On the same day, in late November, DOT Secretary John Volpe gave out with the proposed Railpax passenger-train network and appeared in Washington with testimony supporting U.S. construction of a supersonic jet airliner. Which got the primary attention of the news media? SST, of course. But the supreme irony was that backers of the SST program argued that if we do not go ahead with the program, in five years we will have no air-frame industry. In the news media, nobody said much about the importance of Railpax. And, more important, nobody voiced even a mild worry about whether we will have a railroad industry in five years.

To be sure, promotion of ASTRO is just getting under way, and nobody has a right to expect any great swelling-up of sympathy for (or empathy with) railroads. But even so, it was a tragi-comic thing, to watch the experts in the general media concentrate on an unproved aircraft of questionable value, a possible air and noise polluter—while the good old railroad, hauler of 40%-plus of the nation's freight, bleeds to death.

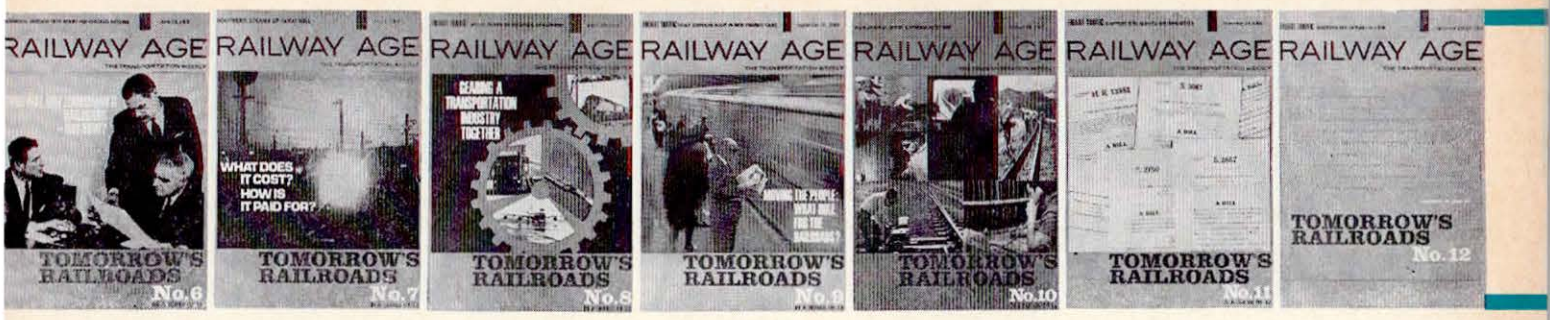
So what does happen next? What about "tomorrow's railroad"? There will be railroads tomorrow, but in what form? And what has to happen, before what ought to happen happens?

In a 1970 series, Railway Age has talked about "Tomorrow's Railroads in Action"—accenting the positive in the railroad spectrum, describing what a number of roads are doing in a number of areas to improve their lot by improving the ways in which they are serving their customers.

A dispassionate observer might say that railroads, generally, ought to be giving greater weight to their own value to the nation—while presenting their case (and a valid one it is) for transportation reform. As one participant in ASTRO promotion puts it, "Why aren't we relating more to the people's interest?"

Inevitably, the search for a tomorrow for the industry will be clouded by the Penn Central situation, and it is not so much the collapse but the suddenness of the failure and the circumstances surrounding it that seem to be in question. PC's trustees, however, have put their case most eloquently before Congress. It is hoped that they will be listened to.

DOT's John Volpe has also attempted to make clear to Congress the real nature of the railroad problem. Penn Central and other roads in reorganization, he pointed out "are not islands



unto themselves. They are part of a national rail network. Given the importance of that network to our total transportation system and to the economic health of the country, we must start now to take the actions necessary to develop a sound and viable industry. And to develop a strong railroad industry, we must develop strong railroads."

The Secretary's immediate aim was to win support for loan-guarantee legislation. But he was looking at the broader issues, and he urged Congress to do the same:

"I cannot over-emphasize the need to deal with the more basic problems confronting the entire railroad industry. Short-run infusions of cash are simply not the final answer. Without some fundamental corrections within the industry and in the government's approach to the industry, a loan-guarantee program may do no more than keep false hopes alive.

"We must squarely face the long-standing problems affecting rail transportation and look for solutions in such areas as revising Federal and state regulatory policies . . . removing discriminatory taxation and reviewing the tax laws for other inequities . . . increasing the productivity of the industry through improved labor and management practices . . . improving railroad operational efficiency with respect to such matters as utilization of freight cars, modernizing facilities and improving track and roadway and rationalizing the total railroad plant . . . and exploring other areas of railroad operations where new concepts or new technology might lead to greater efficiencies."

With the strong backing of DOT and with the respective commerce committees displaying new awareness of both short- and long-term needs, some governmental action can be expected. The questions are, how much? and how soon? and in what specific areas?

ASTRO, with its 30-odd points, is indeed a shopping list. In many ways, it is a list of everything railroads have wanted—and not gotten—for many, many years. Predictably, there has been criticism of the industry for coming up with the same old things—showing that old-age tendency to repeat and repeat and repeat. The critics conveniently overlook the fact that an unfilled need does not just disappear. In the case of the railroads, it just becomes more and more pressing.

At this point, it is impossible to predict what may happen in the next session of Congress on ASTRO-based legislative proposals. It is also impossible to gauge the nature of the support —and the opposition—these proposals will generate.

In general, industry—the railroads' customers—can be counted on to back key parts of ASTRO. It is a simple matter of self-interest.

Rail labor, too, will be in the industry's corner.

Again, self-interest—properly explained and understood—would not permit the employees and their organizations to be any place else.

The two big imponderables are the attitudes of other forms of transportation, and of the public in general.

In recent years, at least, there has been an assumption that determined opposition by motor carriers or railroads carried enough weight for either to block the other's proposals. Without much doubt, there are large chunks of ASTRO which the truckers find unpalatable. But there does remain hope than even the truckers will see that the nation's interest still requires a strong transportation system made up of many modes—and that railroads are, in fact, vital.

And the public's attitude? That is something else again. For years, the public has heard, vaguely, about railroad problems. But railroads kept on running. Then, the public saw news reports about a New Haven filing for reorganization, and a Boston & Maine, and a Jersey Central. Then there was Penn Central, the giant. And Lehigh Valley. And the trains kept running.

All of this creates a certain credibility gap—because the law handles railroads somewhat differently than it handles old Joe, who runs the corner grocery and can't pay his bills. Joe goes out of business.

But the trains keep running—and the public has to wonder if railroads just aren't hollering "Wolf!"

The industry's ASTROnauts—its spreaders-of-the-word—have not one big task, but two: (1) To develop an understanding that change is vital in many areas of railroad operation and regulation and financing; and (2) to bring home to the average citizen the reasons why this is important to him.

And, yes, this is another area where the age of the industry works against it. Railroads have already dominated the transportation scene in this country for a far longer period than did the early forms which railroads replaced. And this is an era in which the huckster's favorite word is "new."

About all a railroad can say, in reply, is "Not new—but improved."

That is the story that has to be sold —the story of essentiality and of improvement and of documented needs.

That is the real story of "Tomorrow's Railroads in Action"—and it is a story that *can* produce action.

Remember how Railway Age started its 1969-70 exploration of the future?

"Tomorrow's railroad won't be today's.

"It won't look like today's.

"It won't act like today's.

"It won't think like today's. Or, to be more precise, it won't suffer the gap between thought and action that sometimes characterizes today's railroads and their operation.

"Tomorrow's railroad will be a magnificent piece of transportation machinery . . . ."

Remember how the "Tomorrow's Railroads" series concluded?

"The contrasts will be startling.

"Today's railroad—and tomorrow's.

"Today's disorganized transportation industry—and tomorrow's service-oriented, multimodal systems.

"Today's fear of failure in transportation—and tomorrow's confidence in success.

"There is a bit of a dream in all this —but there is also a deep-rooted conviction that tomorrow's transportation can be made to function as it has never functioned since the invention of the wheel . . . ."

That is the dream that has to come true. ■

$26-million state program brings

By **F. N. HOUSER,** Mechanical Editor, and **R. D. BARTLEY,** Associate Editor

The New Jersey Department of Transportation and the Erie Lackawanna—with assists from Pullman-Standard and General Electric—are doing their utmost to take any sufferin' out of commuting between Suffern, N.Y., and Hoboken, N.J. With the exception of about one mile, that 30-mile route lies wholly within New Jersey, as does the entire 38-mile Hoboken-Boonton-Dover line which will also be served by the 105 new P-S cars and the 23 GE locomotives.

● **State's commitment.** Over a decade, New Jersey has spent nearly $90 million on the commuter railroads serving its highly congested metropolitan areas. Jersey voters have also approved bonds from which $200 million is pledged for commuter-railroad capital expenditures, as often as possible to be matched with Federal transit-aid funds.

In its first major capital investment in EL suburban facilities, NJDOT chose to commit the entire $26 million expenditure from its own funds since it was unwilling to face the delays often associated with clearance for Federal participation. Earlier, NJDOT did secure Federal assistance for the purchase of 35 Jersey Arrow electric multiple-unit cars for Penn Central (RA, Oct. 7, 1968, p. 20). Currently, quotations for at least 45 more PC Arrow cars, to be built in conjunction with equipment for the Southeastern Pennsylvania Transportation Authority (SEPTA), are being studied in Trenton.

Other NJDOT projects have involved line relocation, new terminal facilities and additional cars and locomotives for the bankrupt Jersey Central, although even such infusions of capital, along with commuter operating subsidies, seem to be far short of what it might take to keep the line in operation in 1971 (RA, Nov. 30, p. 13).

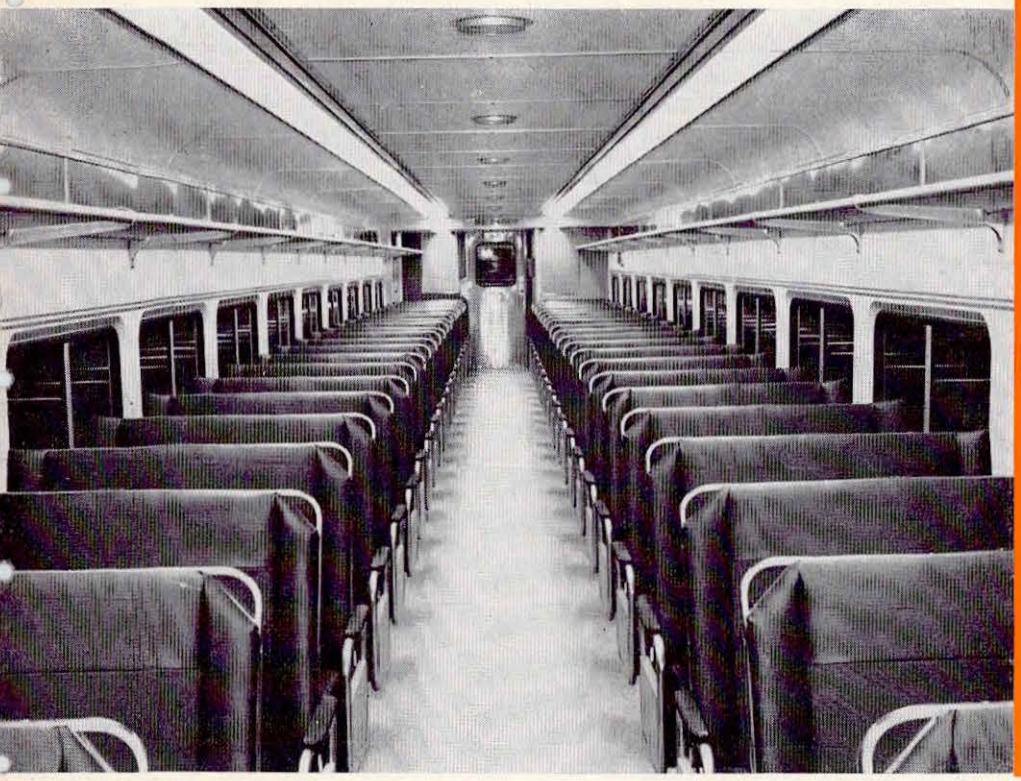
● **Largest operator.** While EL, New Jersey's largest commuter operator, is not quite in the financial plight of PC and CNJ, it is now pushing for a boost in suburban fares, something recently granted the other two roads. State Transportation Commissioner John C. Kohl observes that these are the first general fare increase granted during the decade the state has been paying to keep commuter service alive. Kohl adds that he feels it is high time commuters began paying a greater share of the cost of getting themselves to and from work.

Of the 80,000 daily commuters using Jersey's commuter railroads, 14,000 ride the EL routes which are being re-equipped with the new P-S cars and GE locomotives. Some 22,000 others utilize EL's electrified routes, which also are slated for new equipment, although a possible revamping of the catenary system and distribution voltage holds up a decision on the necessary multiple-unit electric cars in the near future.

The new P-S cars are designed for possible conversion to full electric operation. But right now all EL's attention is being devoted to their successful introduction in diesel-powered push-pull service, scheduled for mid-January. This commuter locomotive and car propulsion system was developed cooperatively by NJDOT, EL, P-S and GE.

"We expect to have all the bugs out before we start revenue service," says G. W. Herkner, Jr., assistant vice president in charge of EL suburban operations. He explains that the road's supervisors have already had instruction in operation and maintenance of the new locomotives at GE's plant. Since the cars and motive power arrived at Hoboken, N.J., similar training has been given to local mechanical department personnel. Next, trainmen and enginemen will start going to class, using new training manuals, a taped presentation involving some 250 slides,

push-pull trains to EL



Partial List of Suppliers for the 105 cars

Trucks	General Steel Industries
Air brakes	New York Air Brake
Sash, luggage racks	Adams & Westlake
Vestibule doors	Morton Manufacturing
Door operators, speed indicators	Vapor Corp.
Acoustical material	H. L. Blachford
Seats	Coach & Car Equipment
Tile flooring	RCA Rubber
Carpeting	Lees Rugs & Carpet
Air conditioning, heating controls	Safety Electrical Equipment
Lighting	Trans-Lite
P.A. System	Midwest Audio
Train Radio	Motorola
Bar Equipment	Anco Industries

KEY ROLE in EL program has been played by Commissioner John C. Kohl of New Jersey Department of Transportation.

INSPECTING U34CH unit are G. W. Maxwell (right), EL president, and O. F. Vea, general manager of GE Locomotive Department.

and a series of lectures. Soon "live" training will start, with trains making runs over the same routes they will use in revenue service.

Initially the new equipment will be substituted for existing trains on present schedules. Once all 105 cars are on the scene by midyear, not only will it be possible to retire the ancient fleet of cars now used, but EL expects to make major revisions in its timetable.

The 85-foot brushed-aluminum cars, trimmed in blue and highlighted in red, represent quite a departure from the past, as commuters will quickly discover. For one thing, all of them—24 cab cars, 71 trailers, 10 bar trailers—are air-conditioned, a new feature. And that is not all. They are also handsomely appointed inside, yet it is obvious that a sense of future economy had a lot to do with the selection of interior materials for the 100-mph cars.

Plastics, melamine, aluminum and stainless steel are used liberally throughout to get away from exposed painted surfaces. While rubber floor tile is finding wide application in some of the tough-service cars—the cab cars and bar trailers—riders will discover carpeting in the trailer cars. And, just because the designers chose serviceable and low-maintenance materials, those choices have not prevented the interiors from being made colorful. Colors like maple sugar, Cerulean blue; moresques in grey-gold, tan-black, blue and green, and blue-turquoise and just plain black are used widely.

● **Seating changed.** Until the state of New Jersey stepped in with an 11th-hour reprieve, it looked as though the riders were going to have three-and-two seating. Because of the state's intervention, however, the cars now arriving in New Jersey, as well as those in production at Pullman-Standard's Chicago plant, all have 2-and-2 bucket-type seating, a possible blessing for riders who should be on a diet but aren't.

Although they are to be operated in push-pull, locomotive-hauled service now, the new cars may some day be part of an electrified system. If that day should come, special structural design features being built into the cars now at the P-S plant will permit speedy and relatively low-cost conversion to electric power. Not only was space allotted under each car for the special components required for electrified operation, but added strength was built into the structure to carry the extra 30,000-35,000 pounds that would come with the power change.

There are also a number of other "firsts" associated with this car order for both the owners and operators and the carbuilder. For one thing, NJDOT and EL can boast of their new operation being the first one east of Chicago to have equipment designed specifically for push-pull service. (Jersey Central has a token push-pull operation, but it is not a major people-mover, nor was it originally designed for push-pull.)

Still another convertibility feature—also a "first" for suburban operations—is being designed into the cars. At the moment, the Suffern line riders will be getting on and off the cars at ground level, just as they have been doing all along with the old cars. Someday, however, platform boarding and de-boarding, which are aids to faster schedules, may come to the line. Again, because of designer foresight, conversion of the car's entrances will be relatively simple and not too much down-time will be involved.

● **New doorways someday.** If platform loading does come, the cars will probably be converted from side loading at the ends to a center door operation. The cars are prepared structurally for this transfer of entrances. Side sill, roof and top angle reinforcements are being built in at the center of the car body, thus permitting sliding side doors.

Convertibility also has been given priority in the design of the trailer cars. One end of each of these cars can be easily set up at a future date as a control cab for electrified multiple-unit operation.

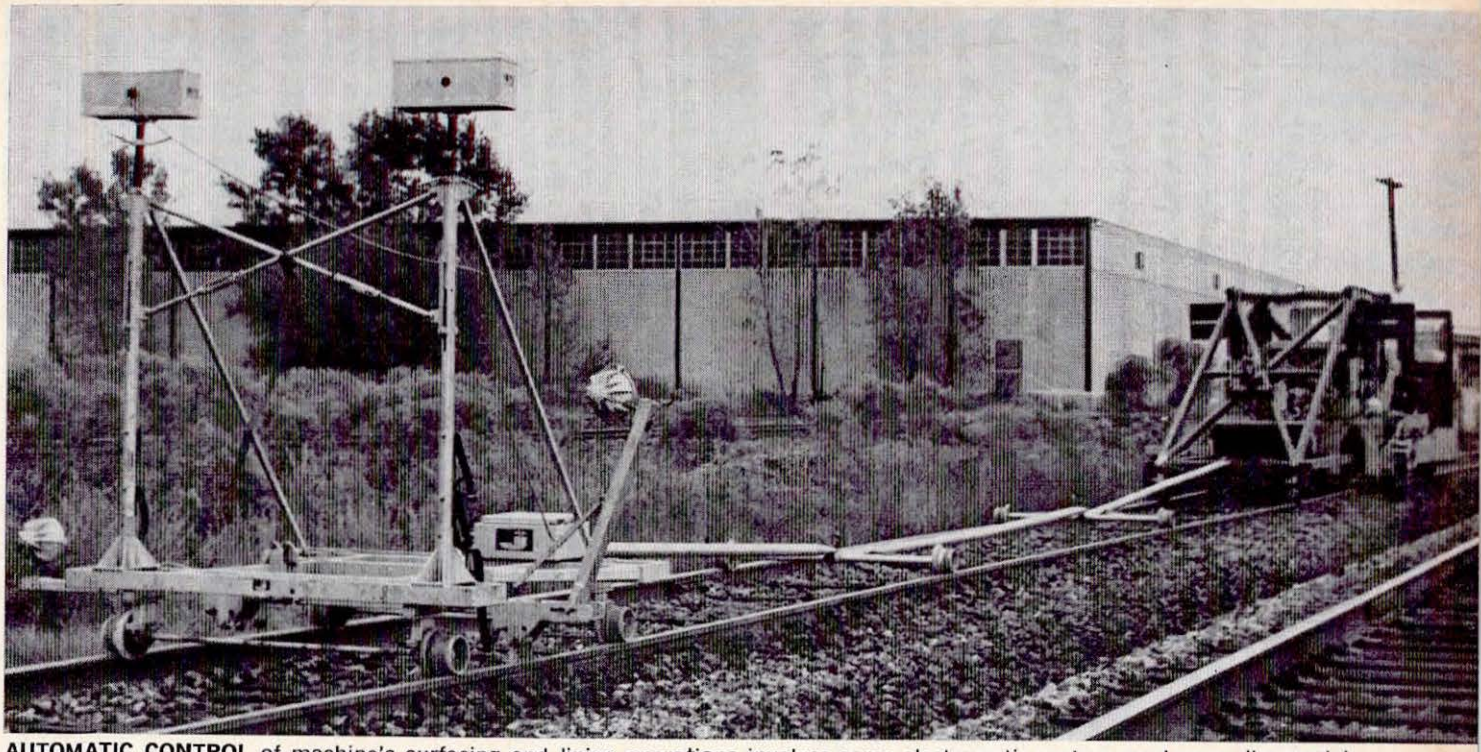
Structurally, the 85-foot aluminum cars are the largest of their type ever built by P-S. They are the first of this type of construction ever built specifically for commuter service. Like the transit cars which the carbuilder delivered last year to Massachusetts Bay Transit Authority, the EL cars' aluminum sides are brush-finished to give them an attractive finish. At the same time, with this type of finish, any in-service scuffs can be camouflaged, thereby cutting maintenance.

● **Longest roof ever.** The corrugated aluminum roof sheets on the cars, which can trace their origin back to corrugated metal grain silos, are 80 feet long, the longest ever applied by P-S at its Chicago plant, or by any other builder serving the transit industry, P-S claims. Since the state of New Jersey wanted to get as much width (10 feet) into the cars as possible, special care was taken in selecting the extruded aluminum side sill design. The sill extrusion was tapered to get the maximum width inside without causing the car to exceed clearance limits. P-S engineers credit new technology in the metals-forming and rolling fields with making some of the EL cars' special structural features possible. Aluminum bodies produced total car weights ranging from 77,540 lb for the cab car to 74,420 lb for the trailer.

Some of the other special features of the cars are: combination intercom and public address system, type H couplers with F shanks, plastic plumbing, chemical toilets (none in trailer cars), welded air brake pipe and a new electro-pneumatic air brake system. The latter, identified as PS-68 by its developer, New York Air Brake Co., provides extra-fast response to application and release of the brakes. Its electric holding feature also permits a prompt recharge of the system after a brake application. A similar type system is also being used in the 130 double-deck suburban cars being built for Illinois Central's suburban service in Chicago.

● **Seating varies.** Although all the

(Continued on page 60)



AUTOMATIC CONTROL of machine's surfacing and lining operations involves same electro-optic system used on earlier models.

PC tests a new tamping machine

Features of the unit include "double-squeeze" tamping and a "truss beam" to take the reaction from track raising and lining.

A new tamping and lining machine is in operation on Penn Central under a demonstration agreement. This is the System 5000 machine, a development of Jackson Vibrators, Inc. Recently, the machine was working at Toledo, Ohio, on the northbound track of the road's double-track branch line to Detroit. It had previously been worked on PC's double-track main line between Sandusky, Ohio, and Huron.

At the Sandusky location, the machine gave the track a ½-inch to 1½-inch raise in limestone ballast, making one insertion per tie. It worked 12 days there and tamped and lined 99,770 feet of track. In this territory there were two turnouts and six curves. Seventy per cent of the grade crossings were removed ahead of the machine so it could tamp through them. In this part of the demonstration the production of the machine averaged 1,723 feet per hour actually worked.

At Toledo the machine was working where the ballast was somewhat muddy. The shoulder ballast had been cleaned recently by Speno equipment. In this area there were more turnouts and curves to contend with. The ties were single-tamped. However, joint ties were given two insertions of the tamping blades. A Kershaw Ballast Regulator worked ahead of the tamper, pulling in stone for the tamping. A light distribution of ballast was made in preparation for the raise. Using a broom attachment, the Regulator followed the tamping operation, shaping the ballast and sweeping the stone off the ties.

In this territory the machine was giving the track an average raise of 1 inch. It worked four days at the location and tamped and lined 15,420 feet of track. Average production per hour actually worked was 1,687 feet.

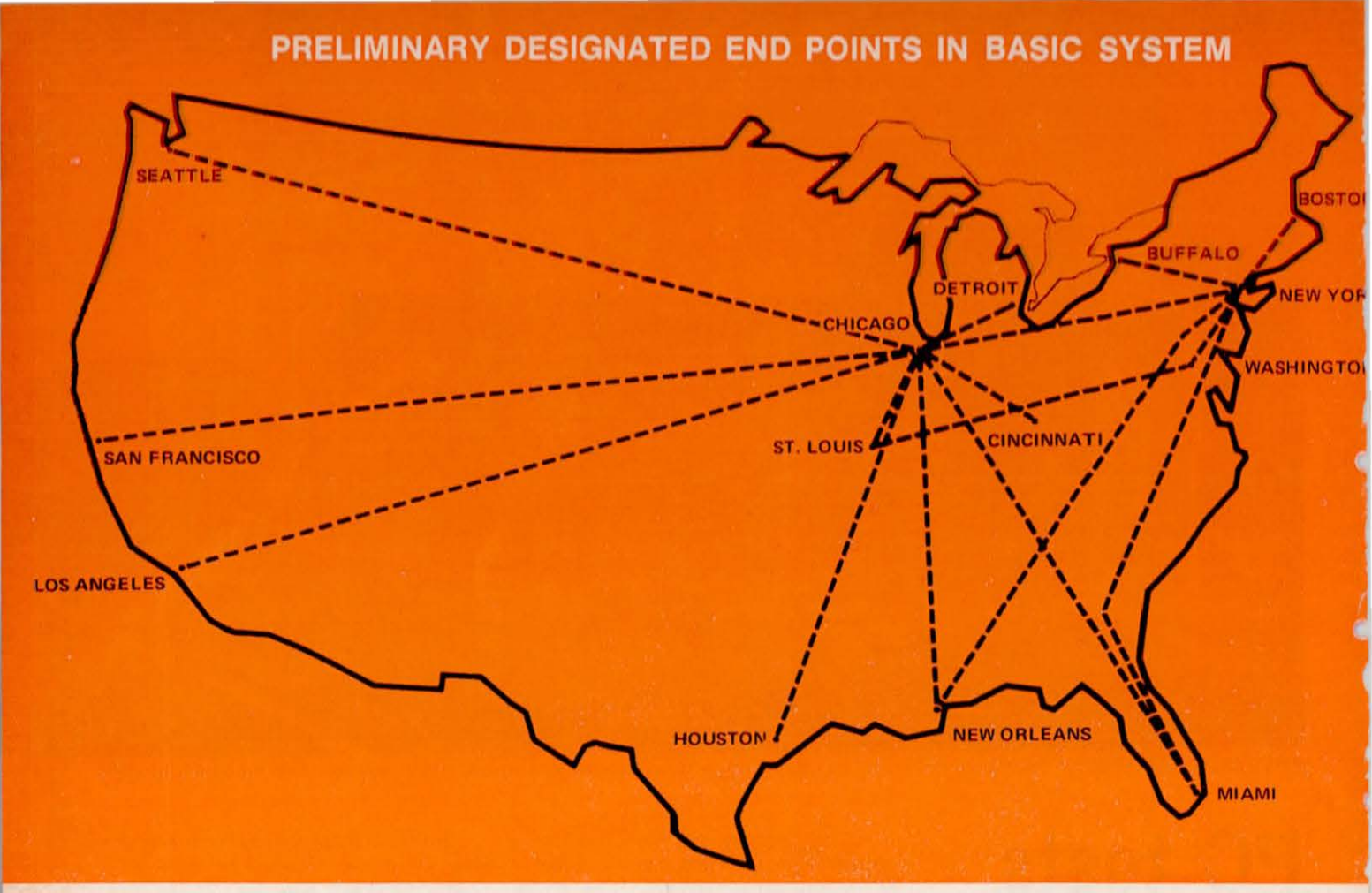
In one test the machine was timed as it was raising and tamping three rail lengths of tangent track. The 117 feet of track were tamped in 3 minutes 25 seconds. This is at the rate of 2,051 feet of track per hour.

● **New features.** The System 5000 differs from earlier models of Jackson 16-tool production tampers in several important respects. For one thing, the vibratory action of the tamping shoes is augmented by what the company calls the "double-squeeze" system, using hydraulic cylinders to provide the squeeze action. As the tamping tools penetrate the ballast, one set of hydraulic cylinders forces them under the tie while another set causes the tamping action to be directed under the rails.

Another departure from earlier Jackson tampers is the mounting of the tamping head and the lining apparatus in a truss frame or beam mounted on four flanged wheels. This frame, having a length of 23 feet, 4 inches, is coupled to and pushed ahead of the prime mover. Track raising is done with hydraulically-actuated rail clamps. The reaction is transmitted through the truss beam to its wheels and thence to the track. Shoulder jacks are thus eliminated.

Thrust for track lining, developed by a hydraulic cylinder, is applied to the rails at the rail clamps. The reaction

(Continued on page 49)



RAILPAX: 16 basic "city pairs"

By **REID BEDDOW,** Washington Editor

Transportation Secretary John A. Volpe strode into DOT's 10th-floor conference room Nov. 30 and delivered the Federal government's proposals for maintaining essential passenger-train service under the aegis of the new National Railroad Passenger Corporation:

Ax intercity passenger trains from the current 366 to about 150. Eliminate all passenger service from Albany, N. Y., to Montreal, Boston west to Albany, St. Louis to Kansas City, and New Orleans west to Los Angeles. Discontinue all north-south service on the West Coast linking Seattle, Portland, San Francisco, Los Angeles and San Diego.

What remains, if Volpe's basic plan survives a mounting wave of protests, will be red, white and blue passenger trains linking 16 city-pairs when Railpax goes into operation next May 1. Volpe said the proposed system would embrace 85% of the urban population presently served by passenger trains, or 105 million persons.

The actual number of trains, and the precise routes they will follow between the end-point cities, will be left to the discretion of Railpax managers.

● **The Railpax map.** These are the end-point cities, and the alternative routings:

— New York to Boston via (1) Providence, (2) Springfield.

— New York to Washington.

— New York to Buffalo via Albany.

— New York to Miami via (1) Columbia, S. C., (2) Charleston, S. C.

— New York to New Orleans via (1) Charlotte, N. C., and Atlanta, (2) Raleigh, N. C., and Atlanta.

— New York to Chicago via (1) Buffalo and Cleveland, (2) Buffalo and Detroit, (3) Pittsburgh and Fort Wayne, Ind., (4) Pittsburgh and Cleveland, (5) Pittsburgh and Deshler, Ohio.

— Chicago to Detroit via (1) Jackson, Mich., (2) Durand, Mich., (3) Lansing and Plymouth, Mich.

— Chicago to Cincinnati via (1) Kankakee, Ill., and Indianapolis, (2) Logansport, Ind.

— Chicago to St. Louis via (1) Springfield, Ill., (2) Decatur, Ill., (3) Kankakee, Ill.

— Chicago to Miami via (1) Fulton, Ky., and Birmingham, Ala., (2) Cincinnati and Atlanta, (3) Evansville, Ind. and Atlanta, (4) Evansville and Birmingham, (5) Louisville and Birmingham, (6) Memphis and Birmingham.

— Chicago to New Orleans.

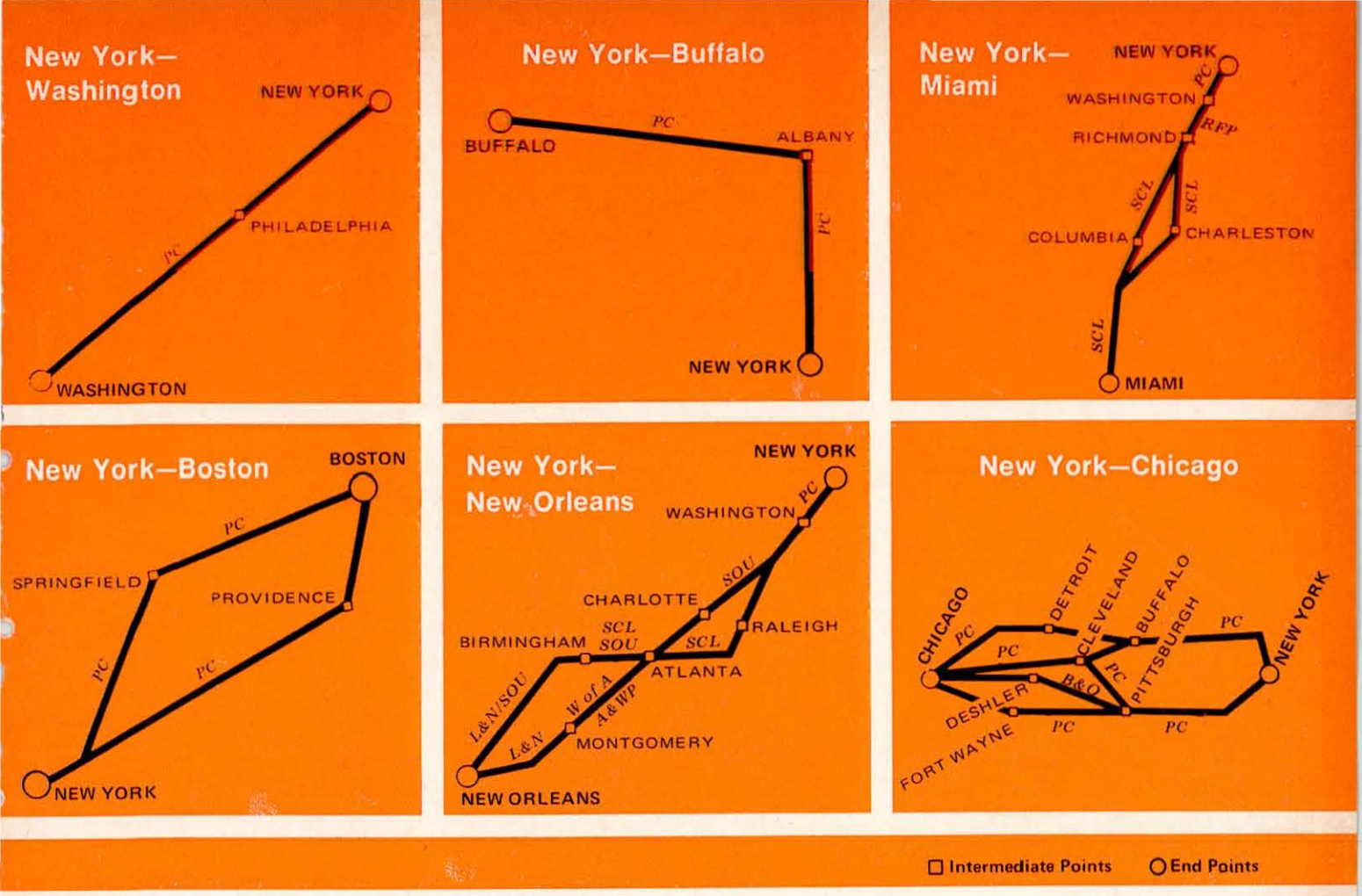
— Washington to St. Louis via (1) Charleston, W. Va., and Cincinnati, (2) Cumberland, Md., and Cincinnati, (3) Pittsburgh and Indianapolis, (4) Harrisburg, Pa., Pittsburgh and Indianapolis.

— Chicago to Houston via (1) Kansas City, (2) St. Louis.

— Chicago to Seattle via (1) Minneapolis/St. Paul, (2) Omaha and Ogden, Utah, (3) Omaha, Green River, Wyo., and Boise.

— Chicago to San Francisco via (1) Kansas City and Barstow, Calif., (2) Omaha, Ogden and Las Vegas, (3) Kansas City and El Paso, (4) Kansas City, Ogden and Las Vegas.

● **Two routes that failed.** The White House, it was reported, scratched at least two other major routes. One would have provided a direct Washington-Chicago service. The other would have linked New Orleans and Los Angeles.



—but many alternative routes

Secretary Volpe was defensive when questioned about these deletions, saying only that the 16 pairs of linked cities were the "combined product of the Office of Management and Budget [of the White House] and DOT."

The OMB is known to be hostile to Railpax, having urged President Nixon to veto the bill for economy reasons. Budget officials feel the new corporation will be a continuing drain on Federal funds.

The government is pledged to provide Railpax with a $40-million direct grant and $300 million in loans or loan guarantees.

● **Final plan due Jan. 28.** Volpe said he expected 90% of railroads now providing passenger service to join the corporation. Those that do may abandon all intercity passenger service not included in DOT's final Railpax system. Those that do not must continue present service until Jan. 1, 1975.

Before the system is final, it must go to Congress, the Interstate Commerce Commission, state regulatory commissions, railroads, and labor organizations for comment. Final routes will be announced Jan. 28, 1971.

● **Service standards.** Volpe said he would stipulate these requirements for Railpax service:

— Trains will be scheduled at "reasonable hours."

— Running times will be as fast as stops, track conditions, and safety requirements permit.

— Modern equipment will be provided, most of it manufactured since 1950.

— Connections at major points will be maintained as far as practicable.

— Sleeping-car service will be available for all schedules having an overnight journey of at least six hours during the period midnight to 8 a.m. Food service will be provided according to the length of the trip.

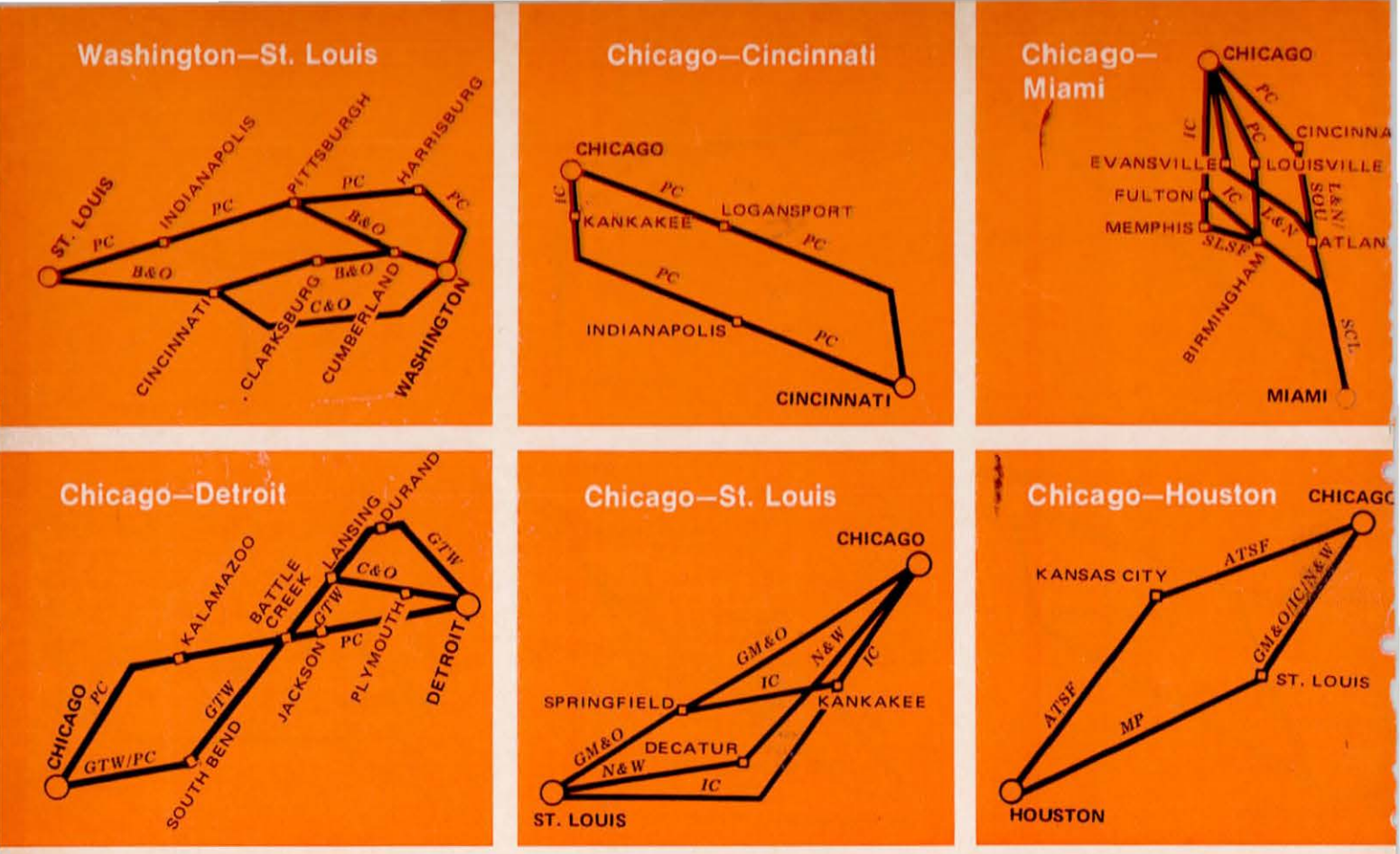
The corporation must operate over the finally-chosen routes until July 1, 1973. It may make additions at any time, if they prove economically practicable.

Volpe said he was "very concerned" about layoffs resulting from train discontinuances. He said there were bound to be "some" layoffs, but he hoped affected workers could be absorbed by "increased freight service."

"I think the system we have designated . . . will prove the wisdom of rescuing rail passenger service," said Volpe. "Frankly, I wish—as does everyone interested in transportation—that the system could be bigger, more all-encompassing. We have made what I think are rational reductions in the existing and unintegrated passenger train service. But we have done this with the view toward organizing it into a cohesive system and making it a financial success."

● **Expansion seen.** A DOT statement accompanying the report which Volpe made public on Nov. 30 noted: "The preliminary objective of the plan is to establish a viable rail passenger system which can be modernized and expanded in accordance with the need and prevent the abandonment of passenger lines in the United States.

The report itself said: "The act entrusts the corporation with the responsibility to develop the full potential of intercity rail passenger service 'by employing innovative operating and marketing concepts.' To achieve this the corporation is given wide latitude and freed of control of the Interstate Com-



merce Commission on regulation of rates; abandonment or extension of lines utilized solely for passenger service; regulation of routes and service; and, except as otherwise provided, the discontinuance or change of passenger train operations."

Emphasizing the need for improving the quality of service, the report said: "Intercity rail passenger service will survive only if the demand for it increases sufficiently to reverse the decline in ridership and the resultant mounting losses experienced to date in providing such service."

Available funds, it added, should be concentrated on a limited number of routes which show some promise of profitability so that necessary improvements can be made.

● **Route-selection criteria.** DOT said eight points were included in the general criteria under which the routes were selected. These included the nation's total transportation needs, demand for service, costs, adaptability of the routes to a total national network, population areas served, profitability, flexibility of management by the corporation and the extent of capital improvements required.

"While each of the above criteria was considered, no single one was overriding," said the report. "Application of these criteria led to the selection of a basic system that is believed to be manageable, economically feasible, and efficient."

The report said it was the intention of the Secretary of Transportation, in establishing service requirements for the system, to preserve corporation discretion to expand rail passenger service as rapidly as the corporation develops a market strategy, gains experience, and shows routes to be justified on the basis of public demand.

While existing equipment will be used at the outset, the report said "expanded new and modern equipment" will be added to the extent practicable. This will be designed "with the objective of greatly increasing the comfort and the convenience of the riders and thereby contributing to the growth and the permanence of the system."

Participating railroads will be required to pay into the operating corporation in cash or in equipment sums determined by various formulas related to their present losses from passenger operations. The participating roads may either acquire stock in the corporation or take a tax write-off.

Secretary Volpe emphasized that the initial routes are designed to serve as "the hub—an essential nucleus—for traveling by rail in the United States."

"It is my hope—actually my intent—that the corporation to be formed to operate rail passenger service will expand upon these routes as demand dictates," Secretary Volpe added.

● **Protests from the West.** Most railroad men withheld public comment on the proposed Railpax routes. The industry's official position, as stated by President Thomas M. Goodfellow of the Association of American Railroads, was a cautious one.

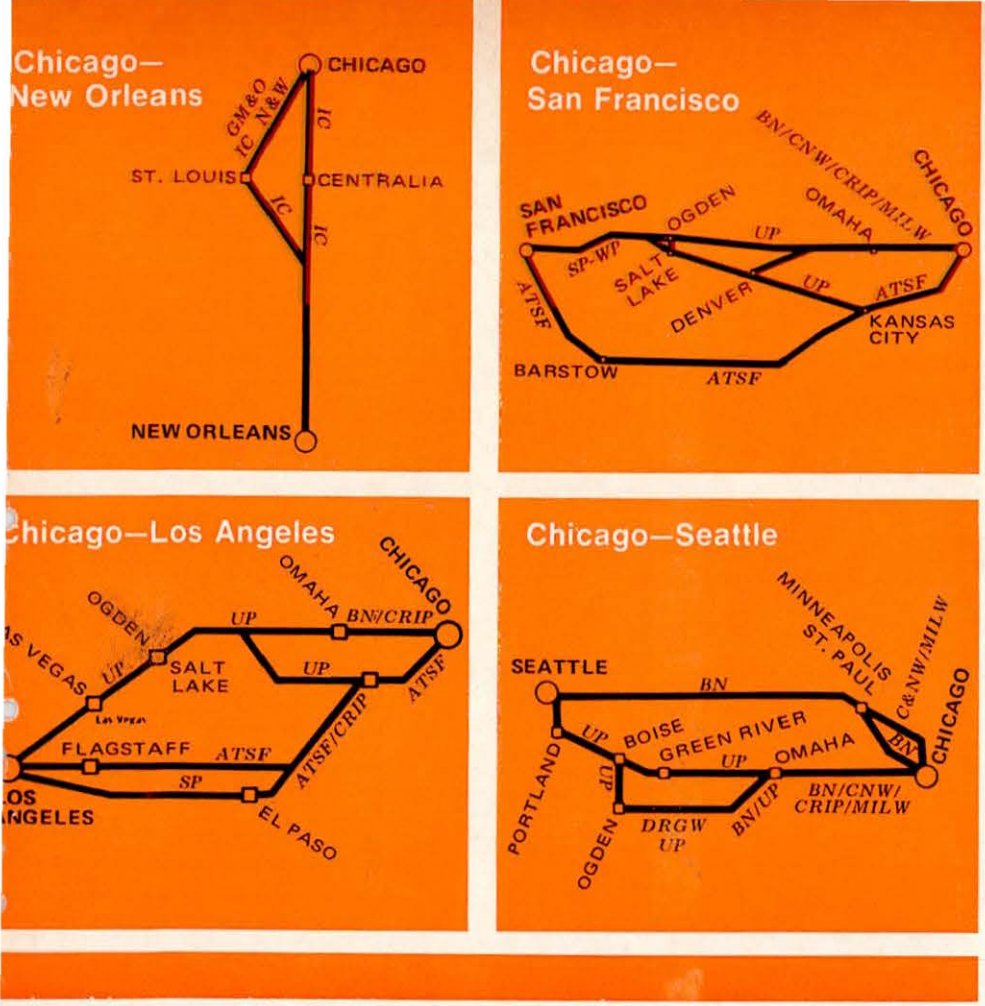
"Based on the railroad industry's own past experience, I am sure the development of preliminary recommendations for a basic passenger system was no easy task," said Goodfellow. "Secretary Volpe, obviously has made his recommendations after a careful appraisal of what is needed to get the new corporation off to the soundest possible start."

The main protests against the recommended routes came from the West and the Southwest.

All six West Coast Senators joined in expressing "grave concern" over elimination of north-south rail routes in Washington, Oregon and California. They asked for a meeting with Volpe in January.

Rep. Jake Pickle (D.-Tex.), a member of the House Interstate and Foreign Commerce Committee, warned that the Southwest "will have strong objections" about the proposed system. "The southwestern part of the country is woefully and unfairly neglected in the plan," said Pickle.

A similar complaint went from Rep.



Richard E. White (D.-Tex.) to the ICC, to DOT and to the Texas Railroad Commission.

Anthony Haswell, chairman of the National Association of Railroad Passengers, hailed the proposed service routes as a "good beginning" and "basically sound." He said NARP would press for year-round Los Angeles to San Francisco and New Orleans to Los Angeles service and summer service from Portland to San Francisco. Haswell also said NARP would urge DOT to make provision for high-speed Portland-Seattle, St. Louis-Kansas City and Los Angeles-San Diego service.

● **State authority pre-empted.** The California Public Utilities Commission was reported to be preparing a stiff protest against elimination of "vitally needed" service.

Railroad legal sources say the precise rights of state regulatory bodies under Railpax may become the subject of litigation.

The Railpax law, as written, specifically pre-empts state authority over intrastate service *if* a railroad joins the corporation.

The relevant clause says: "Upon its entering into a valid contract (including protective arrangements for employees), the railroad shall be relieved of all its responsibilities as a common carrier of passengers by rail in intercity rail passenger service under Part I of the Interstate Commerce Act or any State or other law relating to the provision of intercity passenger service: provided, that any railroad discontinuing a train hereunder must give notice in accordance with the notice procedures contained in Section 13A (1) of the Interstate Commerce Act."

Some lawyers anticipate the validity of this and other sections of the Railpax act being tested in the courts. They visualize a sequence of events similar to this: when the first railroad joins the Railpax corporation, labor unions and possibly a state regulatory commission will file suit to prevent trainoffs and employee layoffs by either the railroad or Railpax. As these lawyers see it, such a suit could go all the way to the Supreme Court and even delay the May 1 commencement of Railpax operations, despite another clause in the act which says, "The basic system as designated by the Secretary shall become effective for the purposes of this Act upon the date that the final report of the Secretary is submitted to Congress and shall not be reviewable in any court."

● **The station problem.** One court action has already been brought under the Railpax act. As a result, a Federal court in Kansas City, Mo., ordered the Union Pacific to continue passenger service into Union Station in that city.

The railroad had wanted to transfer operations to its new James Street Station in Kansas City, Kans., citing savings of $275,000. The Congress of Railway Unions and the National Association of Railroad Passengers promptly brought suit, saying the move violated the prohibition in the Railpax act against any discontinuance of intercity passenger service before Jan. 1, 1975, without the express approval of the Railpax corporation. Rather than continue litigation, UP decided to shelve the move for the time being, at least.

It is certain that the whole question of what is to be done with the "useless mausoleums," as one rail observer described existing marble station facilities in large cities, will prove to be a vexing one to railroads, and for that matter Railpax, in the next few months.

However, the ACT provides that "any state, regional or local agency may request of the corporation rail passenger service beyond that included within the basic system"—provided the requesting agency pays for 66⅔% of additional costs incurred.

Meanwhile, President Nixon appointed these members to a financial advisory panel to advise Railpax's board of directors on ways and means to increase the corporation's capitalization:

Isabel H. Benham, New York, vice president, Shearson, Hammill & Co.; D. B. Herterich, Mendham, N. J., vice president, Manufacturers Hanover Trust; Marshall L. Burman, Chicago, attorney and senior partner, Arvey, Hodes & Mantynband; Claire Giannini Hoffman, San Mateo, Calif., director, Bank of America; Carl H. Lindner, Cincinnati, president and board chairman, American Financial Corporation; Bruce K. MacLaury, Washington, D. C., Deputy Under Secretary of the Treasury for Monetary Affairs; John S. R. Shad, New York, executive vice president, E. F. Hutton & Co.; Lloyd B. Waring, Boston, vice president and director, Kidder, Peabody & Co.

Murray L. Weidenbaum, Chevy Chase, Md., Assistant Secretary of the Treasury for Economic Policy; Charles R. Yates, Atlanta, vice president-finance, Seaboard Coast Line; Howard P. Allen, Covina, Calif., vice president, Southern California Edison Co.; James H. McGlothlin, Washington, D. C., executive vice president-law and finance, Southern, and partner, Covington & Burling; Daniel W. Hofgren, New York, vice president, Goldman Sachs & Co.; Winthrop C. Lenz, New York, senior vice president, Merrill, Lynch, Pierce, Fenner & Smith; Richard C. Pistell, New York, board chairman, Pistell Foundation, and president and chairman, Goldfield Corp.

The panel is required to report to Congress by Jan. 1 on the financial prospects for Railpax. ■

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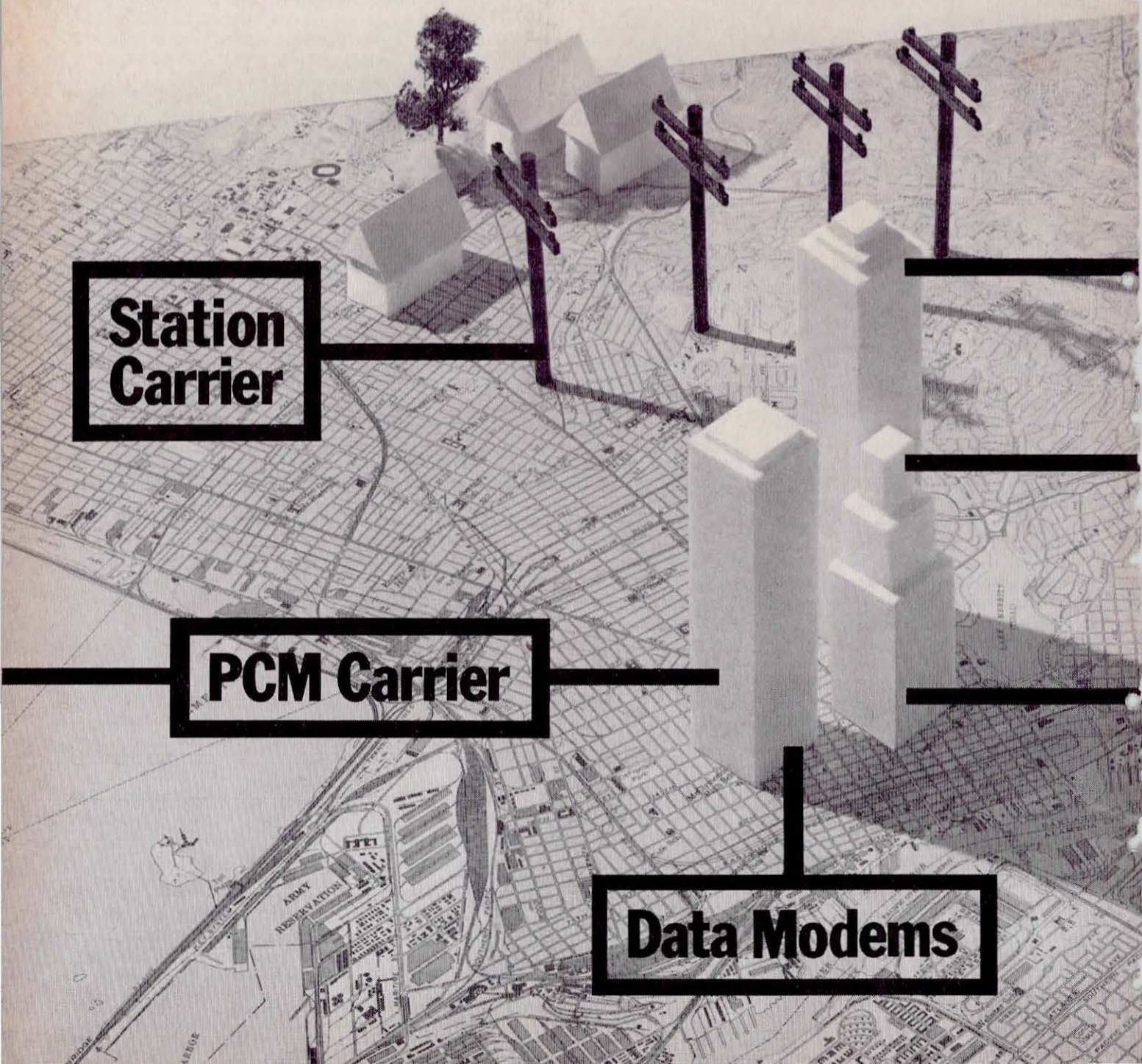
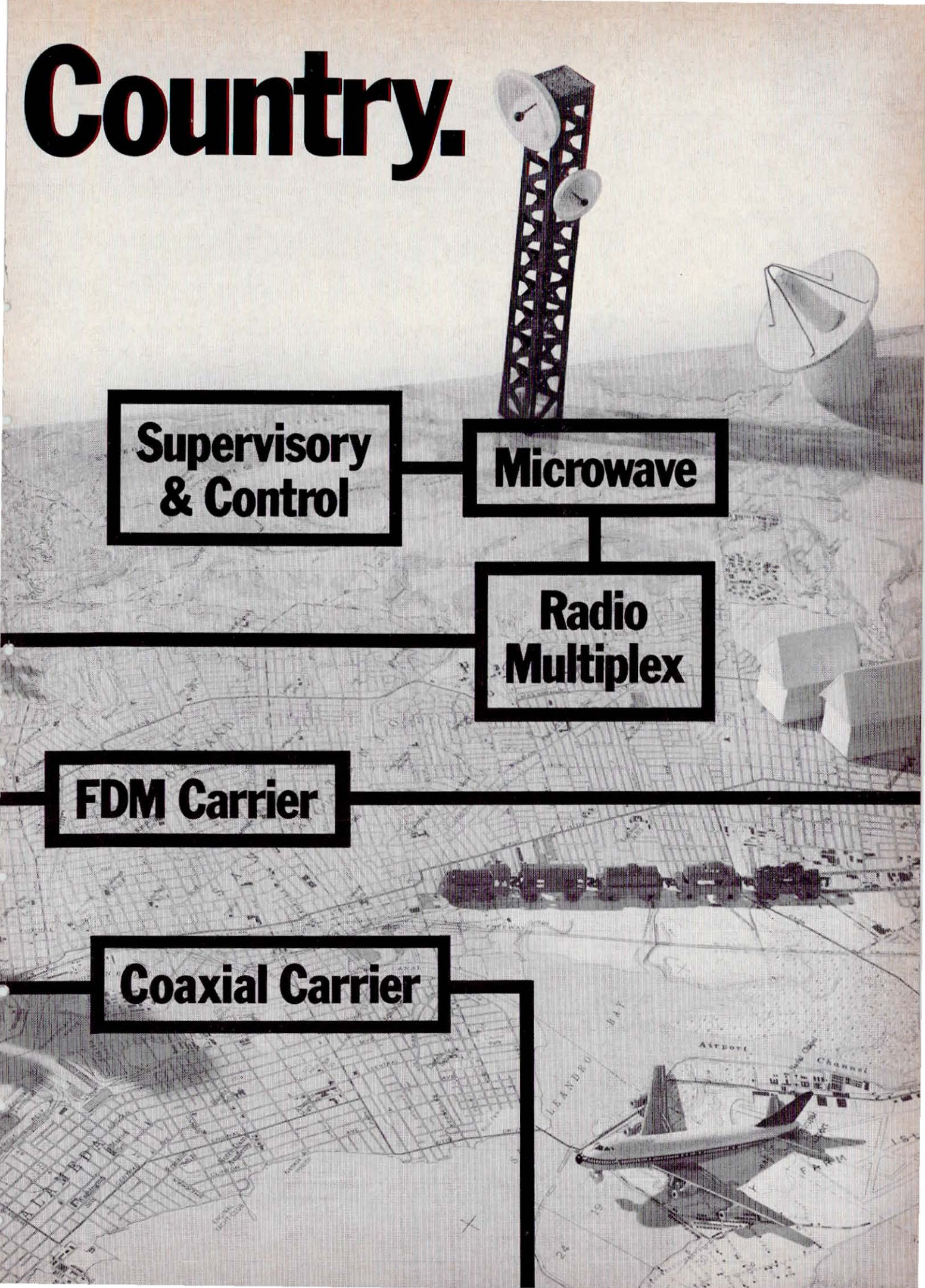


Country.


Supervisory & Control
Microwave
Radio Multiplex
FDM Carrier
Coaxial Carrier

Third Quarter and Nine Months' Figures of Calendar Year 1970

(Dollar figures are stated in thousands: i.e., with last three digits omitted)

		Average mileage operated during period	Operating Revenues				Operating Expenses												Net from railway operation	Railways tax accruals	Net Railway operating income	
							Maint. Way and Structures			Maint. Equipment							Operating ratio					
			Freight	Pass.	Total 1970	(inc. misc.) 1969	Total 1970	Total 1969	Deprec. and Retirements	Total 1970	Total 1969	Deprec. and Retirements	Traffic	Transportation	Total 1970	Total 1969	1970	1969			1970	1969
Akron, Canton & Youngstown	3 mos.	171	1,952	—	2,039	2,065	366	396	21	351	350	121	94	765	1,662	1,768	81.5	85.6	378	229	107	223
	9 mos.	171	5,438	—	5,680	6,023	990	926	74	995	1,038	363	324	2,098	4,748	4,856	83.6	80.6	933	628	471	752
Ann Arbor	3 mos.	299	2,607	—	2,813	2,377	277	443	21	515	454	126	60	1,315	2,291	2,243	81.4	94.4	522	206	117	—190
	9 mos.	299	7,122	—	7,417	7,191	719	1,092	66	1,377	1,340	383	193	3,784	6,373	6,547	85.9	91.1	1,044	588	—173	—494
Atchison, Topeka & Santa Fe	3 mos.	12,882	167,896	6,900	187,114	176,748	29,522	28,334	2,700	38,617	34,023	10,858	4,795	73,903	156,552	148,373	83.7	84.0	30,563	15,459	8,491	8,489
	9 mos.	12,883	499,306	16,249	551,897	530,843	86,619	78,313	8,872	112,240	102,598	32,303	14,710	213,316	455,200	424,874	82.5	80.0	96,697	48,020	30,941	45,181
Baltimore & Ohio	3 mos.	5,552	115,448	868	123,579	112,217	14,900	15,200	1,580	19,440	16,339	3,044	3,002	47,962	92,426	86,615	74.8	77.2	31,153	9,203	5,748	4,266
	9 mos.	5,552	340,177	2,058	360,889	342,486	44,300	43,700	4,973	58,527	53,810	8,097	8,833	143,025	275,826	258,620	76.4	75.5	85,063	26,238	15,794	20,353
Bangor & Aroostook	3 mos.	543	2,553	71	2,687	2,549	804	619	70	1,150	1,026	436	90	1,034	3,333	2,924	124.0	114.7	—645	354	—260	294
	9 mos.	543	9,839	190	10,203	10,137	2,753	2,429	208	3,630	3,227	1,300	268	3,484	10,892	9,930	106.7	98.0	—689	978	521	1,414
Bessemer & Lake Erie	3 mos.	221	11,700	—	12,532	11,543	1,619	1,616	137	1,410	1,532	—31	155	3,002	6,938	6,524	55.4	56.5	5,594	2,939	2,151	2,625
	9 mos.	221	29,233	—	31,475	27,451	3,789	3,640	389	4,973	4,522	995	482	8,039	19,603	17,450	62.3	63.6	11,873	5,958	5,947	5,639
Boston & Maine	3 mos.	1,531	15,342	1,266	18,135	16,394	2,632	2,251	440	2,939	2,755	639	352	8,333	15,179	14,016	83.7	85.5	2,956	1,564	—383	—554
	9 mos.	1,531	44,496	3,866	53,218	51,583	8,063	7,398	1,316	9,137	8,429	1,918	1,100	25,135	46,319	43,517	87.0	84.4	6,899	4,341	—3,265	—1,851
Burlington Northern	3 mos.	23,550	213,901	8,266	233,648	210,959	38,614	32,640	4,483	38,675	35,276	11,751	6,560	99,842	200,746	171,722	85.9	81.4	32,902	21,393	8,197	14,903
	9 mos.	23,550	586,297	20,102	639,236	595,358	98,150	90,092	11,761	116,098	107,459	34,427	19,125	275,268	557,495	500,615	87.2	84.1	81,740	59,484	17,934	29,218
CPR Lines in Maine	3 mos.	234	1,288	81	1,433	1,247	305	451	63	218	240	47	60	636	1,365	1,481	95.3	118.8	68	84	—250	—555
	9 mos.	234	4,918	152	5,220	6,227	878	1,130	188	1,053	1,079	140	185	2,004	4,552	4,727	87.2	75.9	668	243	—408	256
Central of Georgia	3 mos.	1,729	14,394	162	14,947	12,845	2,494	2,262	308	2,751	2,435	783	318	4,855	11,510	10,593	77.0	82.5	3,438	1,432	1,104	499
	9 mos.	1,729	42,337	470	43,878	40,364	7,664	8,549	719	7,973	7,305	2,326	957	14,291	34,348	34,755	78.3	86.1	9,531	3,638	3,165	328
Central RR of New Jersey	3 mos.	592	10,213	1,082	13,144	13,796	1,822	1,620	264	2,101	2,083	341	288	6,914	11,974	11,608	91.1	84.1	1,170	1,301	—2,013	—800
	9 mos.	592	29,465	3,150	38,022	39,445	5,328	4,580	811	6,504	6,329	1,027	872	20,203	35,506	33,946	93.4	86.1	2,516	3,533	—6,748	—3,647
Central Vermont	3 mos.	382	2,148	2	2,230	2,067	612	451	59	161	148	13	26	997	1,874	1,702	84.1	82.3	356	182	108	199
	9 mos.	382	6,500	2	6,743	6,709	1,553	1,317	275	585	643	38	70	2,655	5,229	5,215	77.5	77.7	1,514	504	495	21
Chesapeake & Ohio	3 mos.	5,076	105,262	541	112,178	101,276	12,800	13,700	1,531	20,962	18,664	6,025	3,024	44,427	87,476	81,914	78.0	80.9	24,701	12,891	7,216	8,350
	9 mos.	5,076	319,614	1,296	335,781	303,761	39,350	36,700	4,747	64,279	58,487	18,000	8,830	135,594	266,901	242,654	79.5	79.9	68,880	31,336	27,255	26,241
Chicago & Eastern Illinois	3 mos.	643	7,869	—	8,042	6,408	1,982	1,608	34	1,223	1,348	359	296	2,631	6,420	6,067	79.8	94.7	1,623	307	276	—948
	9 mos.	643	22,256	—	22,720	30,763	4,786	6,258	138	4,060	5,503	1,077	930	8,151	19,073	25,024	84.0	81.3	3,647	770	—204	—32
Chicago & Illinois Midland	3 mos.	121	941	—	1,005	699	157	141	28	350	212	116	6	370	997	773	99.2	110.6	8	25	—38	—102
	9 mos.	121	3,025	—	3,184	2,962	440	358	86	904	661	239	20	1,044	2,750	2,335	86.4	78.8	434	332	160	75
Chicago & North Western	3 mos.	11,271	73,440	5,729	82,614	74,431	12,356	11,155	1,985	12,570	11,907	4,269	2,093	34,178	65,877	62,297	79.7	83.7	16,737	6,365	2,429	—1,721
	9 mos.	11,338	208,240	16,458	234,225	210,711	34,580	31,979	5,829	37,656	37,717	13,078	6,484	99,790	192,886	184,679	82.4	87.6	41,340	18,352	3,100	—13,001
Chic., Milw., St. Paul & Pacific	3 mos.	10,479	64,699	2,623	72,420	69,229	12,267	13,351	1,727	11,211	10,787	3,159	1,890	30,996	60,895	59,082	84.1	85.3	11,526	6,547	—2,049	—2,204
	9 mos.	10,479	186,610	7,100	208,444	201,660	35,026	34,707	4,561	34,644	33,963	9,457	5,804	90,961	180,078	174,074	86.4	86.3	28,366	18,788	—8,787	—7,935
Chicago, Rock Island & Pacific	3 mos.	7,174	63,706	1,168	67,498	64,416	10,188	10,373	581	11,636	9,578	1,758	1,854	30,204	57,382	53,134	85.0	82.5	10,116	5,088	—5,397	—3,454
	9 mos.	7,174	192,042	3,631	203,597	192,364	29,081	30,485	3,007	33,672	31,133	5,275	5,729	89,903	168,881	160,178	82.9	83.3	34,717	14,787	—12,803	—9,672
Clinchfield	3 mos.	312	8,946	11	9,029	8,071	680	745	77	1,475	1,138	600	260	2,528	5,245	4,595	58.1	56.9	3,784	822	2,939	3,011
	9 mos.	310	26,343	16	26,549	24,623	2,260	2,410	225	4,151	3,608	1,815	787	7,245	15,345	14,136	57.8	57.4	11,203	2,449	8,794	8,625
Colorado & Southern	3 mos.	692	4,693	—	4,843	4,775	713	501	72	795	657	303	20	1,693	3,556	3,259	73.4	68.3	1,287	558	407	727
	9 mos.	692	14,259	—	14,589	13,166	1,875	1,440	151	2,311	1,995	907	150	4,866	10,171	9,011	69.7	68.4	4,418	1,547	1,715	2,170
Ft. Worth & Denver	3 mos.	1,201	4,245	—	4,477	4,421	701	621	80	551	533	116	71	2,440	4,176	3,896	93.3	88.1	301	62	—703	40
	9 mos.	1,227	13,848	—	14,522	13,070	2,077	1,937	256	1,586	1,584	338	421	6,815	12,002	10,971	82.6	83.9	2,520	770	—249	272
Delaware & Hudson	3 mos.	751	11,029	207	11,551	10,816	1,856	1,661	128	2,266	1,820	408	378	4,630	9,917	8,731	85.9	80.7	1,633	1,479	—39	774
	9 mos.	751	33,132	448	34,583	34,059	4,857	4,239	376	6,769	5,762	1,223	1,118	13,880	28,885	25,722	83.5	75.5	5,698	4,249	662	4,040
Denver & Rio Grande Western	3 mos.	1,899	24,251	430	25,145	24,724	2,641	2,634	393	3,940	3,666	1,303	832	8,086	16,977	17,106	67.5	69.2	8,168	4,660	3,444	3,443
	9 mos.	1,899	70,072	963	72,568	72,792	7,852	7,629	1,075	11,378	11,139	3,966	2,543	23,527	49,414	50,029	68.1	68.7	23,153	13,078	10,259	10,449

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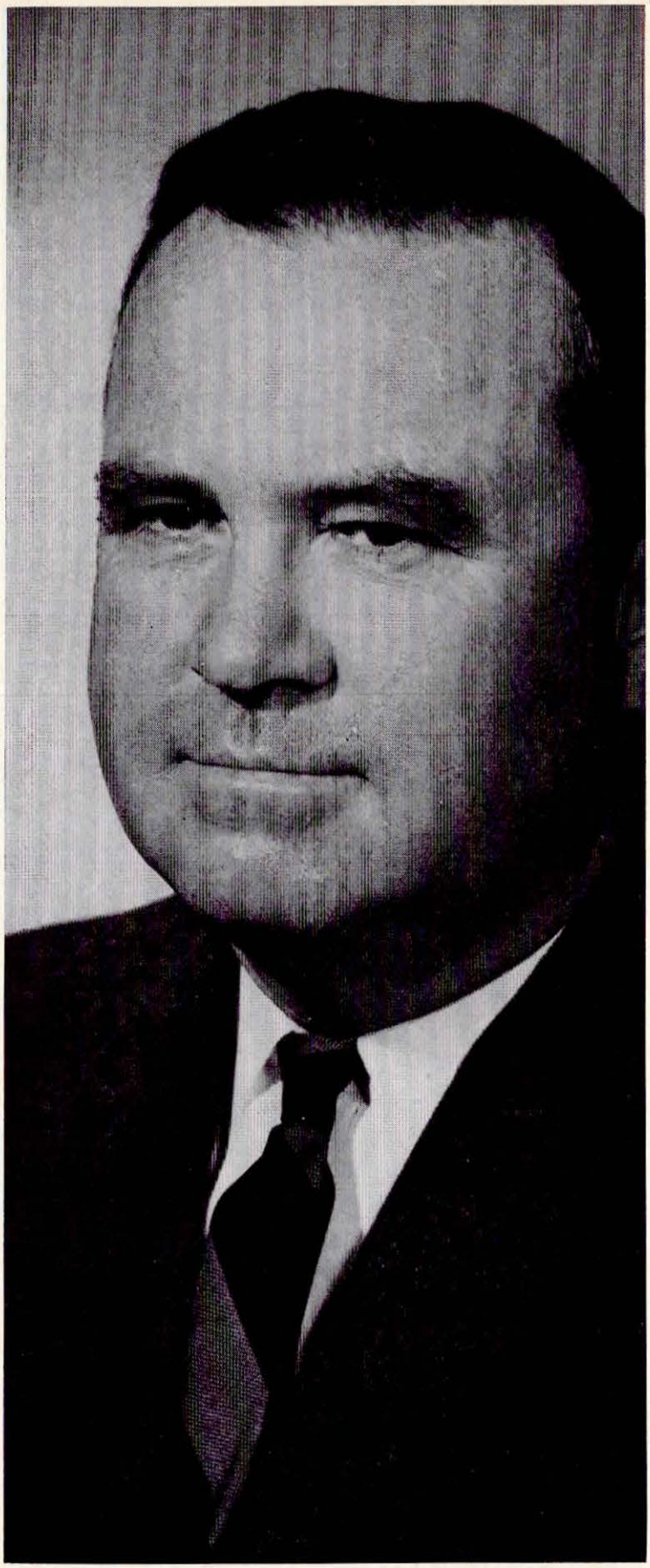

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John H. Lloyd
President
CHICAGO & EASTERN ILLINOIS RAILROAD
and
TEXAS & PACIFIC RAILWAY

RAILWAY AGE AS SEEN THROUGH THE EYES OF RAILROAD PRESIDENTS—NO. 1

Third Quarter and Nine Months' Figures of Calendar Year 1970

(Dollar figures are stated in thousands: i.e., with last three digits omitted)

		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total 1970	Total (inc. misc.) 1969	Operating Expenses: Maint. Way and Structures: Total 1970	Total 1969	Deprec. and Retirements	Maint. Equipment: Total 1970	Total 1969	Deprec. and Retirements	Traffic	Transportation	Total 1970	Total 1969	Operating ratio 1970	Operating ratio 1969	Net from railway operation	Railways tax accruals	Net Railway operating income 1970	Net Railway operating income 1969
Detroit & Toledo Shore Line	3 mos.	50	1,375	—	1,499	1,427	163	191	18	275	274	119	60	548	1,150	1,190	76.7	83.4	349	209	81	144
	9 mos.	50	4,660	—	5,014	5,130	519	603	65	880	821	348	204	1,772	3,704	3,805	73.8	74.2	1,309	615	408	537
Detroit, Toledo & Ironton	3 mos.	478	7,558	—	7,857	6,873	932	689	90	1,584	1,583	603	226	2,894	6,161	5,753	78.4	83.7	1,696	722	553	—328
	9 mos.	478	22,592	—	23,446	23,017	2,453	1,960	271	4,804	4,306	1,797	704	9,007	18,534	16,521	79.0	71.8	4,912	2,162	1,928	2,393
Duluth, Missabe & Iron Range	3 mos.	507	16,437	—	18,171	16,754	1,532	1,984	322	1,407	1,436	547	51	3,176	7,129	7,853	39.2	46.9	11,042	6,770	4,397	3,671
	9 mos.	508	33,699	—	36,882	33,593	4,232	4,349	800	4,662	4,468	1,632	165	8,148	20,081	19,698	54.4	58.6	16,802	11,202	6,013	5,063
Duluth, Winnipeg & Pacific	3 mos.	170	2,309	—	2,340	2,045	353	292	16	213	304	2	53	847	1,534	1,520	65.5	74.3	806	297	186	260
	9 mos.	170	7,458	—	7,569	6,554	923	911	47	598	699	7	160	2,500	4,385	4,341	57.9	66.2	3,184	1,277	848	374
Elgin, Joliet & Eastern	3 mos.	205	10,056	—	15,467	15,155	1,742	1,764	124	2,377	2,251	554	185	5,792	11,755	11,516	76.0	76.0	3,712	1,905	722	580
	9 mos.	205	31,289	—	46,656	45,319	4,838	4,774	354	8,141	6,988	1,514	571	17,934	36,486	34,367	78.2	75.8	10,170	5,569	1,519	1,925
Erie Lackawanna	3 mos.	2,881	59,075	2,676	66,686	61,248	8,376	8,412	721	10,937	10,080	1,865	1,397	31,130	54,749	51,792	82.1	84.6	11,938	5,534	—1,347	—1,604
	9 mos.	2,881	171,939	8,361	195,152	187,844	22,955	22,393	2,246	31,936	29,974	5,618	4,219	91,884	159,457	149,474	81.7	79.6	35,695	16,276	—1,720	7,091
Florida East Coast	3 mos.	554	6,249	—	6,364	6,368	1,905	1,389	190	792	908	296	210	1,823	5,183	4,747	81.4	74.5	1,181	544	2	533
	9 mos.	554	21,648	—	22,104	22,544	7,353	6,310	577	3,178	3,121	871	617	5,741	18,211	17,335	82.4	76.9	3,893	1,135	265	581
Georgia Railroad	3 mos.	331	3,088	3	3,191	2,524	381	357	27	412	413	94	139	969	2,070	1,972	64.9	78.1	1,120	163	735	216
	9 mos.	331	7,633	7	7,950	7,461	1,114	1,110	87	1,182	1,238	278	419	2,695	5,906	5,870	74.3	78.7	2,044	472	1,018	635
Grand Trunk Western	3 mos.	946	15,470	368	16,696	17,093	3,975	2,678	204	2,963	2,782	158	523	11,004	19,852	17,569	118.9	102.8	—3,156	2,159	—10,684	—6,491
	9 mos.	946	51,370	1,189	55,488	55,610	8,887	7,050	609	9,324	8,124	486	1,533	32,696	56,437	50,036	101.7	90.0	—949	6,039	—19,188	—12,984
Green Bay & Western	3 mos.	255	1,829	—	1,878	1,698	207	221	24	252	197	52	119	615	1,325	1,270	70.5	74.8	553	257	52	53
	9 mos.	255	5,205	—	5,321	4,953	533	560	67	706	608	151	368	1,831	3,850	3,623	72.4	73.1	1,471	680	183	157
Gulf, Mobile & Ohio	3 mos.	2,734	24,073	470	25,912	24,434	3,661	3,611	303	4,900	4,754	1,451	995	9,595	20,364	18,779	78.6	76.9	5,548	2,017	1,991	2,220
	9 mos.	2,734	72,666	1,323	77,925	74,124	10,213	10,225	900	15,477	14,377	4,310	2,883	27,665	59,784	55,790	76.7	75.3	18,141	6,610	6,820	7,509
Illinois Central	3 mos.	6,766	75,250	6,252	85,153	79,569	12,739	11,315	1,281	14,481	14,053	4,733	2,198	33,461	68,488	63,711	80.4	80.1	16,664	8,460	3,622	4,596
	9 mos.	6,768	224,025	16,342	251,162	234,421	36,465	31,224	4,282	43,346	40,128	13,066	6,709	96,615	199,312	184,509	79.4	78.7	51,850	23,267	14,948	15,811
Illinois Terminal	3 mos.	393	2,512	—	2,844	2,538	339	277	11	415	393	87	83	1,081	2,128	2,001	74.8	78.9	716	199	29	—12
	9 mos.	393	7,624	—	8,665	7,605	955	853	32	1,298	1,374	278	247	3,467	6,574	6,189	75.9	81.4	2,091	636	87	—143
Kansas City Southern	3 mos.	1,679	22,929	—	24,230	20,871	3,363	2,363	253	4,025	3,324	1,208	823	8,252	17,678	14,802	73.0	70.9	6,551	2,074	2,379	2,423
	9 mos.	1,679	65,947	4	69,894	61,574	8,279	7,051	757	11,255	9,726	3,555	2,505	23,153	48,585	42,679	69.5	69.3	21,309	6,715	7,850	7,790
Lake Superior & Ishpeming	3 mos.	130	1,754	—	2,475	2,898	251	306	55	430	410	189	9	621	1,465	1,553	59.2	53.6	1,010	677	362	700
	9 mos.	130	3,360	—	5,026	5,307	722	816	158	1,183	1,116	567	28	1,398	3,730	3,797	74.2	71.5	1,296	1,007	468	625
Preliminary figures																						
Lehigh Valley	3 mos.	941	11,239	—	11,663	12,252	1,449	1,389	241	1,805	1,665	328	365	5,796	10,216	10,053	87.6	82.1	1,447	995	—1,013	—253
	9 mos.	941	35,305	—	36,578	36,515	4,567	4,265	707	5,431	4,899	730	1,204	18,050	31,716	30,547	86.7	83.7	4,862	3,004	—3,504	—2,487
Long Island	3 mos.	322	2,415	20,990	24,624	22,010	3,939	3,104	276	7,183	5,971	856	285	15,021	28,429	24,583	115.5	111.7	—3,805	1,867	—5,503	—5,242
	9 mos.	322	7,205	61,606	71,831	65,713	11,426	8,737	846	21,427	17,111	2,700	916	44,669	84,275	71,252	117.3	108.4	—12,445	5,324	—19,767	—13,531
Louisville & Nashville	3 mos.	6,068	95,385	320	98,533	86,557	14,432	13,919	1,292	19,017	18,232	7,143	2,198	36,709	77,368	71,319	78.5	82.4	21,165	8,045	11,988	7,077
	9 mos.	6,068	272,274	800	281,418	248,333	40,739	36,124	3,864	56,080	51,389	20,935	6,673	106,970	225,900	198,826	80.3	80.1	55,518	21,080	27,953	26,377
Maine Central	3 mos.	921	6,036	1	6,219	5,918	1,303	1,178	110	1,152	1,259	284	123	2,416	5,390	5,277	86.7	89.2	829	499	31	—64
	9 mos.	921	19,133	2	19,563	19,043	3,825	3,870	306	3,886	3,921	857	378	7,529	16,839	16,538	86.1	86.8	2,724	1,456	273	268
Missouri Illinois	3 mos.	333	1,658	—	1,685	1,669	271	239	— 37	763	639	346	49	405	1,586	1,375	94.2	82.4	99	226	688	962
	9 mos.	333	5,343	—	5,389	5,089	919	702	— 20	2,236	1,878	1,043	146	1,308	4,902	4,003	91.0	78.7	488	711	2,315	3,037
M-K-T Lines	3 mos.	2,631	17,155	—	17,790	16,937	3,020	2,769	782	2,176	1,965	378	949	6,634	13,677	12,951	76.9	76.5	4,113	1,410	—517	—640
	9 mos.	2,683	49,870	—	51,749	49,634	8,163	7,621	1,480	6,403	6,055	1,152	2,915	19,867	39,990	37,697	77.3	76.0	11,759	4,162	—2,613	—624
Missouri Pacific	3 mos.	8,905	89,498	458	94,666	85,489	13,456	13,110	1,752	15,244	14,275	3,929	2,128	34,535	69,787	64,997	73.7	76.0	24,879	6,829	8,413	5,809
	9 mos.	8,915	263,559	1,076	278,057	258,631	40,694	40,560	4,325	45,416	42,439	11,619	6,693	100,394	206,175	192,879	74.2	74.6	71,882	20,100	23,637	20,996
Monon	3 mos.	540	5,715	—	5,942	5,237	744	774	60	897	807	201	246	2,171	4,457	4,361	75.0	83.2	1,484	372	497	—88
	9 mos.	540	17,063	—	17,690	16,929	2,186	2,359	205	2,765	2,493	622	762	6,710	13,661	13,086	77.2	77.2	4,029	1,241	859	668
Monongahela	3 mos.	193	1,156	—	1,183	1,045	338	344	32	184	184	19	3	405	961	973	81.2	93.1	222	98	—95	—365
	9 mos.	193	4,070	—	4,118	3,781	948	956	100	551	644	65	11	1,340	2,983	3,013	72.4	79.7	1,135	283	71	—454

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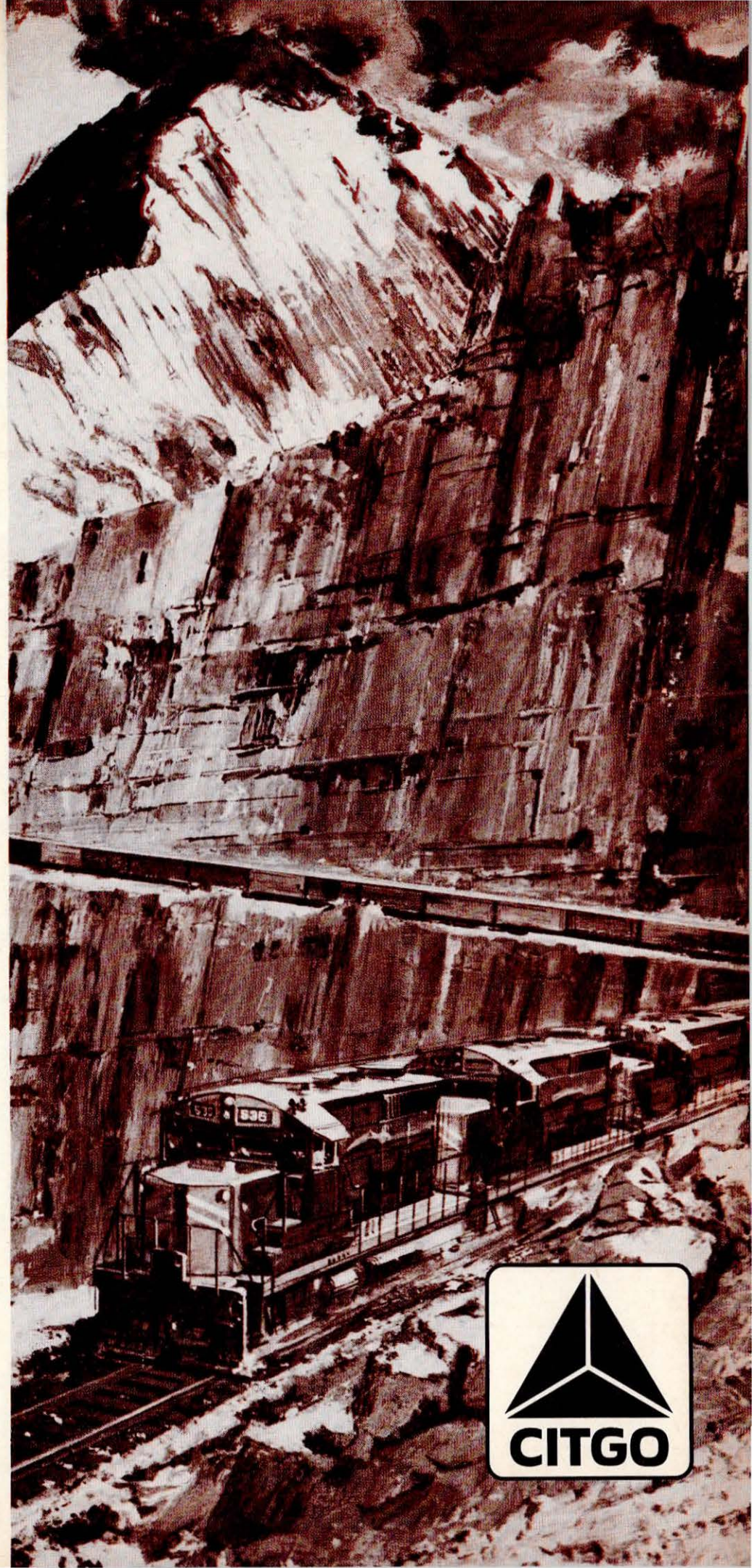

Third Quarter and Nine Months' Figures of Calendar Year 1970

(Dollar figures are stated in thousands: i.e., with last three digits omitted)

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total 1970	Total (inc. misc.) 1969	Operating Expenses: Total 1970	Total 1969	Maint. Way and Structures: Retirements	Maint. Way and Structures: Total 1970	Maint. Way and Structures: Deprec. and Total 1969	Maint. Equipment: Retirements	Maint. Equipment: Traffic	Maint. Equipment: Deprec. and Transportation	Maint. Equipment: Total 1970	Maint. Equipment: Total 1969	Operating ratio 1970	Operating ratio 1969	Net from railway operation	Railways tax accruals	Net Railway operating income 1970	Net Railway operating income 1969
Norfolk & Western	3 mos.	7,594	173,043	409	180,489	165,451	21,202	21,115	2,415	30,947	26,774	12,623	3,951	65,996	130,755	120,849	72.4	73.0	49,734	13,967	27,174	27,165
	9 mos.	7,594	520,983	1,032	542,150	502,690	58,507	55,021	7,873	94,322	81,180	37,614	12,120	201,269	392,088	351,402	72.3	69.9	150,062	46,073	80,704	83,157
Norfolk Southern	3 mos.	624	3,197	—	3,275	2,791	542	509	82	538	465	177	172	1,078	2,635	2,407	80.5	86.1	640	269	158	—42
	9 mos.	624	9,502	—	9,773	8,925	1,814	1,680	231	1,527	1,422	532	512	3,118	7,856	7,390	80.4	83.0	1,917	774	424	218
Northwestern Pacific	3 mos.	323	2,482	6	2,499	2,459	704	628	60	218	136	2	21	854	1,917	1,896	76.7	77.1	582	242	—112	—152
	9 mos.	324	7,291	14	7,333	8,034	2,235	2,134	185	555	398	8	62	2,676	5,823	5,665	79.4	70.5	1,509	705	—606	44
Oregon Electric Ry	3 mos.	186	1 313	5	1.398	1,284	196	251	20	37	35	—	9	518	784	821	56.1	63.9	614	103	19	—24
	9 mos.	186	3,646	5	3.896	3,830	600	643	62	116	120	—	36	1,532	2,373	2,403	60.9	62.8	1,523	316	27	115
Penn Central	3 mos.	20,278	343,361	36,374	419,068	398,440	55,260	45,705	8,219	77,945	66,039	15,877	5,534	217,313	384,121	343,454	91.7	86.2	34,947	37,567	—55,727	—14,782
	9 mos.	20,375	1,053,824	108,626	1,277,465	1,222,343	164,852	137,085	23,916	242,761	203,855	47,716	17,120	665,378	1,178,613	1,031,549	92.3	84.4	98,852	113,140	—116,549	—32,367
Penn Reading Seashore Lines	3 mos.	322	2,134	35	2,368	2,045	531	451	90	373	388	39	17	1,511	2,530	2,427	106.8	118.7	—162	186	—927	—1,172
	9 mos.	322	6.133	61	6,923	6,304	1,555	1,306	296	1,089	1,097	120	49	4,558	7,585	6,989	109.6	110.9	—663	529	—3,125	—2,853
Pittsburgh & Lake Erie	3 mos.	209	9,800	14	10,395	9,999	1,266	1,163	137	3,045	3,313	1,496	202	3,907	9,058	8,902	87.1	89.0	1,337	2,923	3,232	2,743
	9 mos.	209	28,286	45	30,098	28,728	3,910	3,140	477	9,756	9,461	4,455	618	11,493	27,715	25,637	92.1	89.2	2,383	6,538	9,450	8,389
Reading	3 mos.	1,228	24,738	2,000	29,537	27,124	3,949	4,162	487	4,832	4,717	1 262	685	13,004	24,332	23,056	82.4	85.0	5,205	2,821	—170	143
	9 mos.	1,228	70,540	5,991	84,920	81,178	12,541	12.046	1,707	15,228	14,462	3,861	2,097	38,826	74,414	69,222	87.6	85.3	10,506	7,713	—4,034	—102
Richmond, Fred. & Potomac	3 mos.	118	4,701	958	6,350	6.648	920	583	126	1,005	830	305	92	2,083	4.629	4,181	72.9	62.9	1,720	926	826	738
	9 mos.	118	15.045	2,589	19,919	21,521	2,359	1,815	336	2,973	2,579	874	273	6,684	13,884	13,144	69.7	61.1	6.035	2,929	3,009	2.907
St. Louis-San Francisco	3 mos.	4,547	44,063	—	46,006	42,523	6,008	5.495	621	6,660	5,844	2,378	1,555	18,679	35,560	31,909	77.3	75.0	10,446	3,652	3,742	4,312
	9 mos.	4,547	131.875	—	137,812	129,480	17,701	16,552	1,805	19,375	17,583	7,045	4,730	55,606	105,334	95,627	76.4	73.9	32,478	11,568	13,582	14,361
St. Louis Southwestern	3 mos.	1,520	29,636	—	30,051	27.514	3,306	2,733	254	5,862	4,818	2,645	740	10,675	21,425	18,621	71.3	67.7	8,626	2,539	6,839	6,474
	9 mos.	1,520	91,241	1	92,533	86,914	9,588	7,519	791	16,842	14,139	7 863	2,313	31,811	62,944	54,151	68.0	62.3	29,589	9,238	21,869	21,330
Savannah & Atlantic	3 mos.	167	1,196	—	1,234	1,014	25	63	—9	235	212	90	26	342	679	758	55.0	74.8	555	395	364	116
	9 mos.	167	3,544	—	3,657	3,440	144	358	25	677	642	263	79	1,036	2.083	2,355	57.0	68.5	1,574	1,058	936	454
Seaboard Coast Line	3 mos.	9,264	110,492	4,997	119,719	114,817	16,297	14,972	1 459	21 645	21,493	6.218	3,494	46,201	94,385	90,150	78.8	78.5	25,334	10,028	5,215	5,536
	9 mos.	9,259	348,687	14,310	377,706	363,102	49,709	44,614	4.357	68,351	61,994	18,272	10.741	139 954	288,963	273,723	76.5	75.4	88,743	32,487	23,806	27,766
Soo Line	3 mos.	4,693	29,429	—	30,136	26,744	5,434	4,768	388	3,672	3,319	935	842	11,225	22,398	20,662	74.3	77.3	7,738	3,503	2,270	1 743
	9 mos.	4,694	82 589	—	84,270	78,097	13,768	12,178	1.074	11,176	10.481	2.765	2 456	32,523	63,531	59,185	75.4	75.8	20,739	8,794	6,050	5,349
Southern Railway	3 mos.	6,068	93,583	1,294	99,092	92,110	13,945	14,273	1 668	18,178	16,719	5,792	2 225	32,256	72,106	67,848	72.8	73.7	26,986	9,525	14,425	12,579
	9 mos.	6,068	280,621	3,127	296,075	281,227	42,126	37,486	4,277	53,727	48,035	17,631	6,607	95,695	214,268	194,706	72.4	69.2	81,807	27,940	43,700	40,402
Alabama Great Southern	3 mos.	529	10,022	140	10,746	9,537	1,288	1,417	223	2,073	1,849	726	227	3,090	7,281	7,540	67.8	79.1	3,465	1,321	1,642	433
	9 mos.	529	29,581	324	31.417	29,622	4,921	5,566	719	6,079	5,[illegible]	[illegible]	681	9,805	23,265	24,409	74.1	82.4	8,152	2,648	3,654	1,195
Cinn., New Orleans & Tex Pac	3 mos.	415	14,294	4	14,929	13,547	2,375	1,910	249	3,249	2,837	1,333	320	3,966	10,613	9,433	71.1	69.6	4,316	1,888	2,957	2,298
	9 mos.	415	41 561	11	43,648	40,977	5,114	4,639	779	9,488	8,356	3 921	947	11,376	28,968	26,811	66.4	65.4	14,680	6,356	9,498	8,143
Georgia Southern & Florida	3 mos.	454	4,200	—	4,382	3,603	463	734	40	387	237	106	94	1,221	2.359	2,350	53.8	65.2	2,023	399	713	97
	9 mos.	454	12,428	—	12,932	11,915	1,661	1,762	136	1 084	684	273	281	3,577	7,179	6,472	55.5	54.3	5,753	958	1,934	1,148
Southern Pacific	3 mos.	11,675	229,244	3,001	239,885	233,726	28,084	28,065	2,822	42,215	41 310	15,101	3,853	100,060	188,831	182,804	78.7	78.2	51,054	20,657	12,914	15,149
	9 mos.	11,715	674,446	7,743	704,725	690,198	82,011	82,895	8,630	123,534	126,506	45 123	11,822	287,488	548,133	536,706	77.8	77.8	156,592	62,716	51,074	50,879
Texas & Pacific	3 mos.	2,141	20,728	26	22,228	20,575	3,336	2,527	290	4,131	3,834	1,396	873	9,058	18,395	16,136	82.8	78.4	3,832	1,233	1,631	1,652
	9 mos.	2,073	63.735	62	68,067	63,731	9,444	8,805	880	12,276	11 607	4,012	2,544	26,456	53,650	49,061	78.8	76.9	14,417	4 298	6,366	5,829
Toledo, Peoria & Western	3 mos.	239	2,473	—	2.569	2,185	517	387	16	755	237	63	191	896	2.056	1,813	80.0	83.0	514	187	70	15
	9 mos.	239	7,341	—	7,647	7,117	1,143	1,029	50	855	703	181	578	2.741	5,905	5,341	77.2	75.0	1.742	615	299	419
Union Pacific	3 mos.	9,473	165,185	3,075	175,795	162,657	19,352	18,727	1,987	30,960	28,535	13,039	3,947	62,472	127,800	121,202	72.7	74.5	47,995	14,207	33,611	20,745
	9 mos.	9,473	466,148	7,472	495,451	467,509	55,030	53,501	6,074	92,291	83 261	38,613	12,981	180,446	374,315	350,373	75.6	74.9	121,136	43,037	77,844	57,071
Western Maryland	3 mos.	865	13.029	—	13,734	11,662	1,972	1,830	203	2.766	2,855	903	471	5,074	11,140	10.360	81.1	88.8	2.594	1,269	2,117	1,374
	9 mos.	865	38,500	—	40,633	37,536	5,712	5,558	627	9,225	8,632	2,733	1,409	15,272	34,072	31,352	83.9	83.5	6,561	3,429	5,865	5,110
Western Pacific	3 mos.	1,176	17,385	—46	17,470	17,066	3,420	2,689	709	3,492	3,179	971	935	7,865	17,145	15,424	98.1	90.4	325	1,416	—2,724	278
	9 mos.	1,176	49,501	261	50,493	50,530	8,018	7,090	1,310	10,830	10,262	2,994	2,764	21,755	48,063	45,162	95.2	89.4	2,430	4,133	—4,685	1,187

Are you stopping cars by "center-pin shear"?

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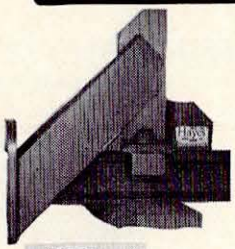

Type SF (two identical blocks like one at left) cushions the impact by controlled friction. At slow approach, wheels ease Stop blocks gently against tie in cushioning ballast. At higher speeds, wheels force blocks down on rail, adding friction braking to cushion.

All-steel construction—universal fit—no holes to drill—tighten four nuts for installation.

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Circle 18 on coupon page 53

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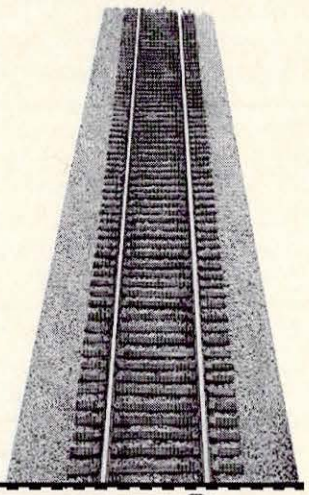

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Circle 19 on coupon page 53

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That's correct, just 31 pounds. Equip your cars with Dynaglide collectors and cut more than 600 pounds of dead weight per vehicle.

And get these outstanding features:

Top performance to speeds of 80 mph . . . collector shoe with minimum life of 25,000 car miles . . . contact pressure adjusting independently of collector height . . . direct connection from shoe to motor through fuse box . . . only five major components . . . only one moving part . . . simple maintenance.

Your O-B District Manager can tell you more about why this lightweight current collector is in a class by itself.

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Circle 20 on coupon page 53

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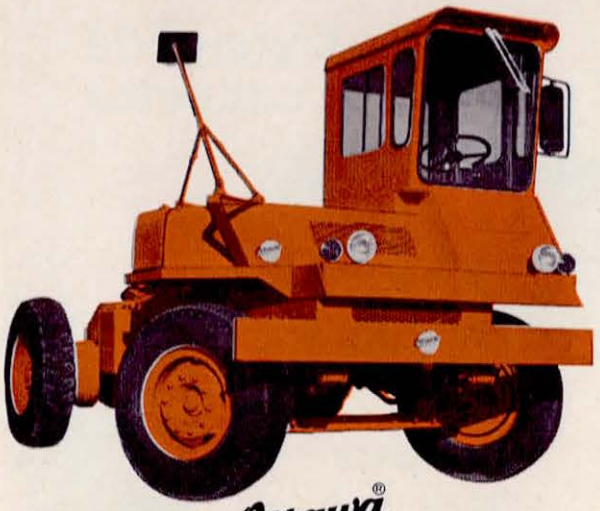

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Circle 21 on coupon page 53

TRANSIT ROUNDUP

ST. LOUIS SEEKS MORE FEDERAL AID: Transit Services Corp., which operates the Bi-State Transit System serving St. Louis, will seek substantial Federal aid designed to upgrade its existing bus network which, says TSC President John C. Baine, will serve as a feeder system for the 82-mile "rail-like" rapid transit system which eventually will be built. Baine said the 1969-75 Transit Development Program would be revised for resubmission to the U.S. Department of Transportation to take advantage of the increased Federal funds provided by the Urban Mass Transportation Assistance Act of 1970.

CLEVELAND WILL TEST WABCO SYSTEM: The Cleveland Transit System has signed a contract with Westinghouse Air Brake for tests of a propulsion system developed by WABCO in conjunction with Reliance Electric Co. Called WABCO PWM, the new system operates on the basis of "pulse width modulation," which permits the use of low-cost A.C. motors to drive mass transit vehicles. Three of Cleveland's "Airporter" cars will be equipped with the new system on a test basis starting early in 1971.

DENVER SEEKS CONSULTANT PROPOSALS: Denver's Regional Transportation District (RTD) plans to select a consulting firm early in 1971 to proceed with Phase I in the development of a regional rapid transit system. Harry L. Parrish, RTD executive director, says 15 "requests for proposals" have been sent to transportation consultant firms. Proposals are due Jan. 4. "We are asking that the firm selected complete its analysis and recommend a plan to the District by the end of 1971," says Parrish. "In Phase II this plan will be refined, spelled out in detail, costs and an implementation program will be determined and a final recommendation prepared." RTD was created by the 1969 Colorado General Assembly to develop a seven-county public transportation plan. This plan, together with a bond issue to finance a transit system, must be submitted to the voters before July 1, 1974. The counties involved are Adams, Arapahoe, Boulder, Douglas, Jefferson and Weld, and the city and county of Denver.

BOSTON MAPS FIVE-YEAR PROGRAM: The Massachusetts Bay Transportation Authority has asked the 1971 General Court for $250 million in additional bonding powers to provide the local funding necessary for a 1971-1975 mass-transportation program estimated to cost $622.1 million. Under the Urban Mass Transportation Assistance Act of 1970, the Federal government will pay up to two-thirds of the cost of capital improvements for public transit. Bulk of the money will go for system expansions—continuation of the South Shore Extension to Weymouth or Holbook, $30 million; Southwest Corridor Extension to VFW Parkway, West Roxbury, $156 million; Harvard-Alewife Extension, $150 million; and extension of the Blue Line (East Boston Line) from the Wonderland Terminal to Pines River in Revere, $31.5 million. The program also calls for $54 million for improvements to surface car lines and the Central Subway; $9 million for station modernization; $13.8 million for consolidation of bus garages; $9 million for power distribution improvements; $9 million for other plant improvements, including engineering and maintenance facilities; and $24 million for purchase of 600 new buses.

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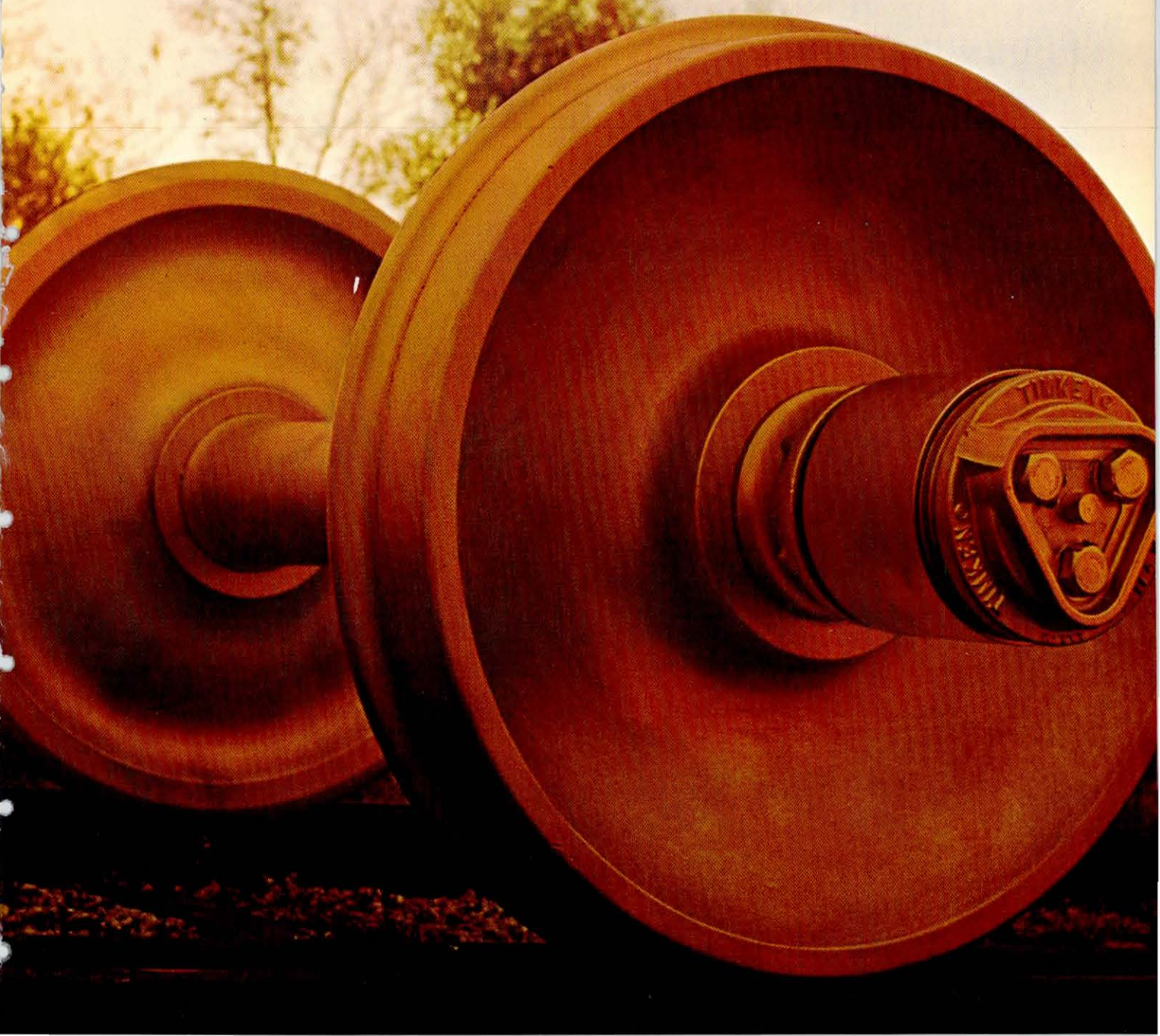

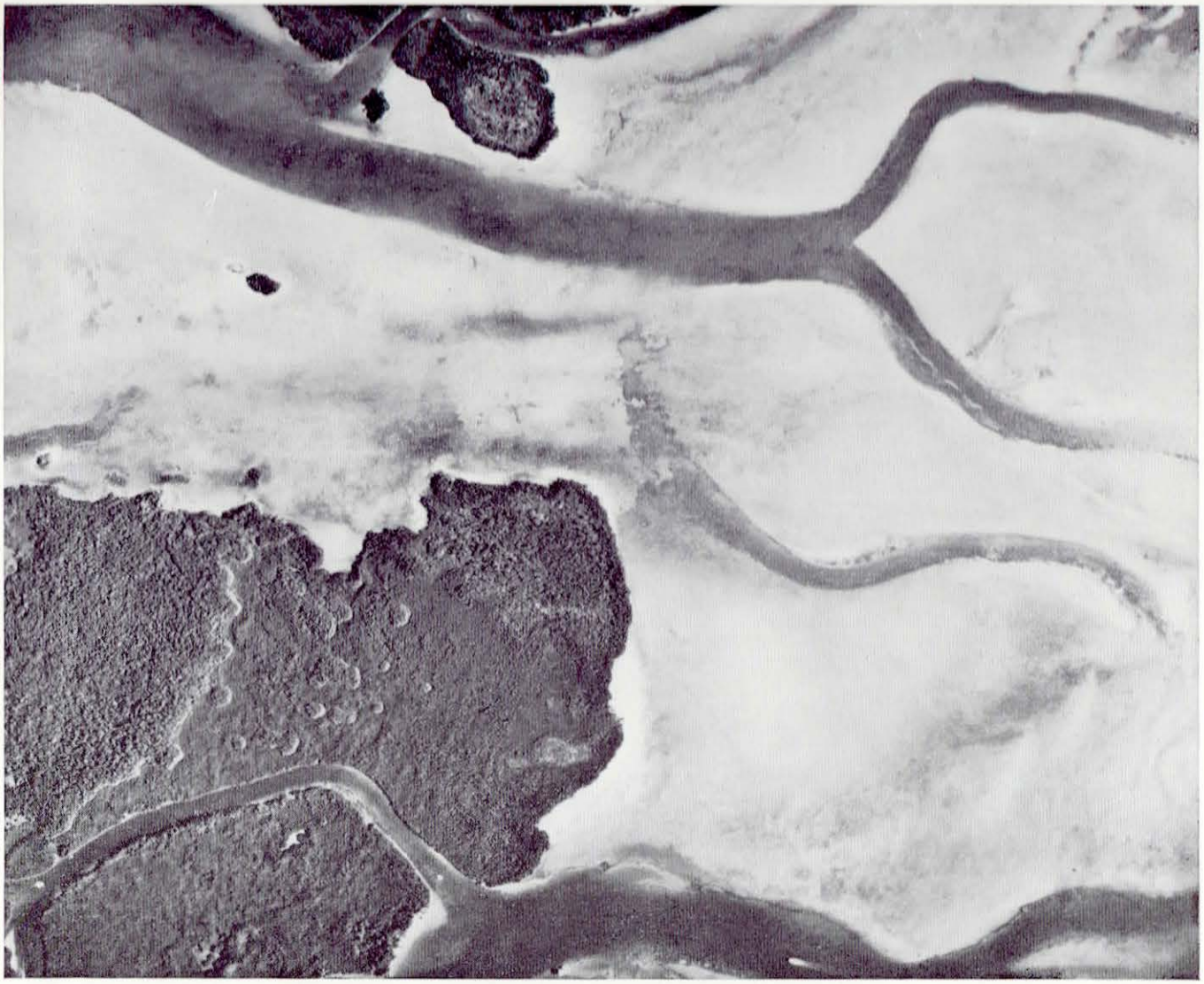

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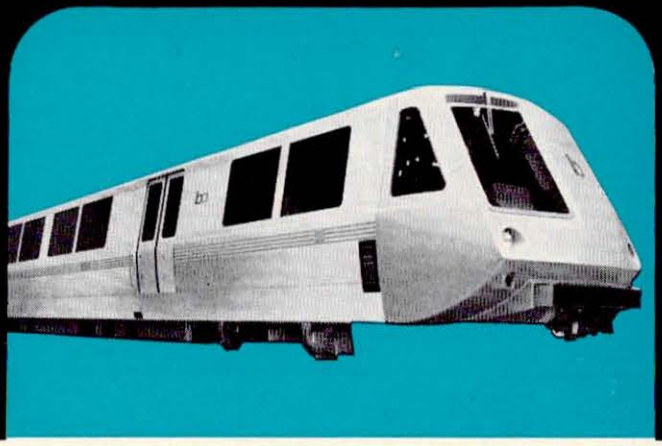

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Circle 7 on coupon page 53

'How I'd run

The maintenance man

First of all, I'd get out of my office and shake the hands of a few maintenance men. I'd tell them how much I appreciated their work and how important they are to the success of the line.

Then I'd give them cars that are easy to maintain. Like the new stainless steel passenger jobs that Cleveland runs out to the airport.

They weigh a lot less per foot of car length, which means less wear and tear on the bearings, brakes and propulsion equipment. You don't have to paint them, because stainless steel resists corrosion without paint.

And even though stainless cars get dirty just as fast as the old-style painted cars, they don't show it as soon. Now, I'm not in favor of dirty cars, but giving an 85-foot car a bath takes time and money and effort. So if I had to stretch out the time between washings, I'd get stainless cars because they look better longer.

If I were running this railroad, I'd make it a stainless steel line.

this railroad'

The weekly passenger

Well, I'm glad you asked me. I take the train in to go shopping or to meet Harry and I used to think all trains were like the ones on our suburban line.

Then Mother came up to see us from Philadelphia and she was just raving about the new stainless steel Metroliner. So I went back with her for a few days and the trip was really a lovely experience. The seats were so comfortable, and the trip was so fast. Somehow the train seemed so much cleaner. It really spoiled me for our local railroad.

What Mother likes is how the high-speed trains make it easier to visit us. Harry likes the way they get her back to Philadelphia faster. The Metroliner is about the only thing she and Harry have ever agreed on.

If I were running the railroad, I'd try to make every train as good as a Metroliner.

INTERNATIONAL NICKEL

For a copy of our brochure—"Nickel Stainless Steel—The Modern Material for Modern Transit"—write to Section RA1270, The International Nickel Company, Inc., One New York Plaza, New York, N.Y. 10004. In Canada, The International Nickel Company of Canada, Ltd., P.O. Box 44, Toronto-Dominion Centre, Toronto 111, Ontario.

Circle 23 on coupon page 53

How a crane became a brush cutter

Burlington Northern has several branch lines in southern Illinois where the brush and trees had not been cut for some time. As a result, they had grown tall enough to pose a hazard to the telephone circuits in wet weather—and it was decided that these branch lines should be cut on the line-wire side to eliminate the interference.

Cutting trees and brush under line wires normally has to be done either by men with hand tools or by an off-track machine capable of scrambling up and down embankments, which sometimes are quite steep and abrupt. BN engineers believed a brushcutter could be developed and mounted on the end of the boom of a Burro crane that could cut all brush regardless of the terrain on either side of the right of way, as far out as 50 feet. Since the road owns a number of Burro cranes, BN engineers have been urging the manufacturer of these cranes, the Western Cullen Division of Federal Sign & Signal Corp., to develop such a brushcutter for their use.

The result was the development of a rotary brushcutter, consisting of two flailing blades, mounted at the end of a special articulated boom. The main boom is 35 feet long; the auxiliary boom is 11 feet long. The main boom is of tubular construction, reinforced for rigidity. It contains the hydraulic lines for operating the auxiliary boom, as well as the inclination and tilting of the cutter head.

● **Cuts good-sized trees.** The auxiliary boom can be moved through an arc in which the angle varies from about 45 degrees to 110 degrees below the main boom. Also, the cutter head, which cuts a 5-foot swath, can be tilted 45 degrees to conform with the contour of the ground. It will cut brush and trees more than 4 inches in diameter. Because the boom mounting is ahead of the center of the crane, it will reach out as far as 52 feet from the track center line, according to Western-Cullen.

The controls and operation of the articulated boom and cutter are hydraulic. Power is received by a pump developing 2,000 psi from a power take-off on the Burro's transmission. The new boom and the brushcutter were mounted on one of the road's Model 30 Burro cranes.

● **Used with another unit.** The Burro brushcutter started working on the BN's branch line from Centralia, Ill., to Herrin. During the 13 days it worked, the machine cut a swath averaging 25 feet wide on 10.25 miles of track, a BN engineer reports. To speed the work, BN decided to cut the area near the track with a Kershaw on-track brushcutter so that the Burro unit could concentrate on brush requiring a longer reach. The Kershaw unit started working, cutting a 16-foot swath. The Burro brushcutter followed behind cutting brush the remaining distance out to and under the line wires.

Still later, both units worked on the road's Yates City-to-Vermont branch line. During 19 working days, the Burro machine cut a swath averaging 34 feet wide on 24.88 miles of track.

A spokesman for BN reports that the Burro brushcutter, a prototype machine, has averaged 6.12 miles of right-of-way cut per day, cutting an average swath width of 28 feet. It has cut brush and trees below track level and can reach up the banks to cut brush there. ■

This advertisement is neither an offer to sell nor a solicitation of offers to buy any of these securities. The offering is made only by the Circular.

NEW ISSUE

November 25, 1970

$43,000,000

Union Pacific Railroad Company

7.20% Equipment Trust Certificates Due December 1, 1976

(Series B)

The issuance and sale of these securities are subject to authorization by the Interstate Commerce Commission.

Price 100%

plus accrued dividends from December 1, 1970

Copies of the Circular may be obtained from any of the several underwriters, including the undersigned, only in States in which such underwriters are qualified to act as dealers in securities and in which the Circular may legally be distributed.

The First Boston Corporation

Dillon, Read & Co. Inc. — Salomon Brothers

Blyth & Co., Inc. — Drexel Harriman Ripley Incorporated — duPont Glore Forgan Incorporated — Eastman Dillon, Union Securities & Co.

Goldman, Sachs & Co. — Halsey, Stuart & Co. Inc. — Hornblower & Weeks-Hemphill, Noyes

Kidder, Peabody & Co. Incorporated — Lazard Frères & Co. — Lehman Brothers Incorporated

Loeb, Rhoades & Co. — Merrill Lynch, Pierce, Fenner & Smith Incorporated — Paine, Webber, Jackson & Curtis

Smith, Barney & Co. Incorporated — Stone & Webster Securities Corporation — Wertheim & Co.

White, Weld & Co. — Dean Witter & Co. Incorporated — Bache & Co. Incorporated

THE SOUND OF TOMORROW

618 - 11, 430 Hz

FREQUENCY SHIFT OVERLAY

FSO

Frequency Shift Overlay is an entirely new idea in overlay track circuit techniques. A unique means of modulation, together with improved tuning and new receiver technique (patent pending), virtually eliminates noise and interference problems. Wide flexibility of application is made possible by a choice of fifteen operating frequencies, all selected to avoid harmonics of power-line frequencies, and all compatible with one another — successive blocks using adjacent channels is no problem.

Plug-in, modular construction simplifies maintenance and makes conversion from one channel to another a matter of removing and replacing frequency determining units. Equipment can be centralized — transmitter and receiver in the same wayside case using the same power supply or battery. Distance between equipment and track connection can be as much as 3000 feet for the transmitter or 6000 feet for the receiver.

Further information is available. Just ask for Publication PD-36.

GENERAL RAILWAY SIGNAL COMPANY

A UNIT OF GENERAL SIGNAL CORPORATION

ROCHESTER NEW YORK 14602

3518 ATLANTA BOSTON CHICAGO MONTREAL NEW YORK OAKLAND ST LOUIS ST PAUL

Circle 16 on coupon page 53

BURRO Time Savers!

Rugged, versatile BURRO Cranes are sturdily built for years and years of hard, continuous service. On the line, in the yards or in the Stores Department, BURRO gets the job done fast and efficiently.

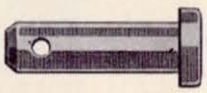
Write for complete information and BURRO Crane Bulletin No. 51

96

WC WESTERN-CULLEN DIVISION
FEDERAL SIGN AND SIGNAL CORPORATION
2702 West 36th Place · Chicago, Illinois 60632

Circle 25 on coupon page 53

pic-a-bolt off our shelves



Most of the large bolts you'll need tomorrow are on our shelves today. Air Brake Valve Bolts, Dome Cover Eye Bolts, Angle Cock "U" Bolts and dozens of others. Buy one or a carload . . . pay only blanket prices. Makes that part of your job a lot easier, doesn't it?

Bolts made to AAR Specifications

Member Railway Supply Association, Inc.

LBF
LANMAN BOLT & FORGE COMPANY, INC.

475 East 151st Street ■ East Chicago, Indiana 46312
219/398-0275

Circle 14 on coupon page 53

Chas. O. Morgret
Southern

Robert G. Flannery
WP

People

BALTIMORE & OHIO.—Edward B. Keenan, assistant regional sales manager, appointed regional manager—customer service, Northwest Region, with headquarters as before at Chicago.

BESSEMER & LAKE ERIE.—Mike Rougas, assistant chief engineer since Oct. 1, appointed chief engineer, Greenville, Pa., succeeding **Richard A. Ullery,** who retired Nov. 30, after 35 years of railroad service, the last 30 with the B&LE.

CANADIAN PACIFIC.—D. S. Collings, transportation assistant, appointed director, transportation projects, with headquarters as before at Montreal.

V. G. Smart, director of training (car service), retired Nov. 30, after more than 53 years of service.

CHESAPEAKE & OHIO-BALTIMORE & OHIO.—Thomas G. Gordon, assistant director, appointed director of industrial development, Baltimore.

DELAWARE & HUDSON.—L. C. Smith appointed general electrical inspector, Albany, N.Y., succeeding **L. J. Bowen,** who retired Oct. 19, after over 27 years of service.

Carl B. Sterzing, general solicitor, appointed general counsel, succeeding **John F. Reilly,** retired.

ERIE LACKAWANNA.—Howard A. Pattison, district sales manager, Columbus, Ohio, transferred to Cincinnati, Ohio, succeeding **John L. Tjaden,** who retired Oct. 31, after 40 years of service. **Donald I. Ohlemacher** appointed division sales representative, Cleveland, succeeding **L. R. Carpenter,** promoted to district sales manager, Columbus, succeeding Mr. Pattison.

NORFOLK & WESTERN.—Jon L. Manetta, assistant superintendent, Pocahontas Division, Bluefield, W. Va., appointed superintendent, N&W's Kansas City Terminal. **J. C. Hillman,** assistant manager operating rules, Roanoke, succeeds Mr. Manetta and will be replaced by **William H. Burr,** trainmaster, Tipton, Ill.

PENN CENTRAL.—William R. Divine, vice president and comptroller, **Southern,** Washington, D.C., appointed vice president—finance and accounting, **Penn Central,** Phil-

C. D. McConnell
WABCO

R. L. Tannehill
Federal Sign

adelphia, effective Feb. 1, succeeding **Jonathan O'Herron,** resigned to join the investment firm of **Lazard Freres & Co.** in January, 1971.

Robert E. Sullivan, general superintendent of transportation, Western Region, appointed assistant general manager of that region at Chicago, succeeding **Donald A. Swanson,** named general manager, **Indiana Harbor Belt.**

SOUTHERN.—Charles O. Morgret named manager, public relations, with primary responsibility for news media relations and special projects. **Albert S. Eggerton, Jr.,** appointed senior editor in charge of all creative work, including writing activities involving the road's publications, articles and speeches. **Clarence S. Carbaugh** appointed manager, administrative services, which includes supervision of the road's photographic laboratory. **William F. Noall** named editor, TIES, company magazine. All four were formerly special representatives.

TERMINAL R.R. ASSN. OF ST. LOUIS.—C. C. DeWeese appointed director of budgeting and economic controls, St. Louis, Mo., reporting directly to the president.

UNION PACIFIC.—Ralph G. Webber promoted to assistant to the treasurer, New York. He will also continue as cashier.

WESTERN PACIFIC.—Robert G. Flannery, vice president, **Penn Central,** elected executive vice president of the WP, San Francisco, effective Jan. 1, reporting directly to **Alfred E. Perlman,** president.

SUPPLY TRADE

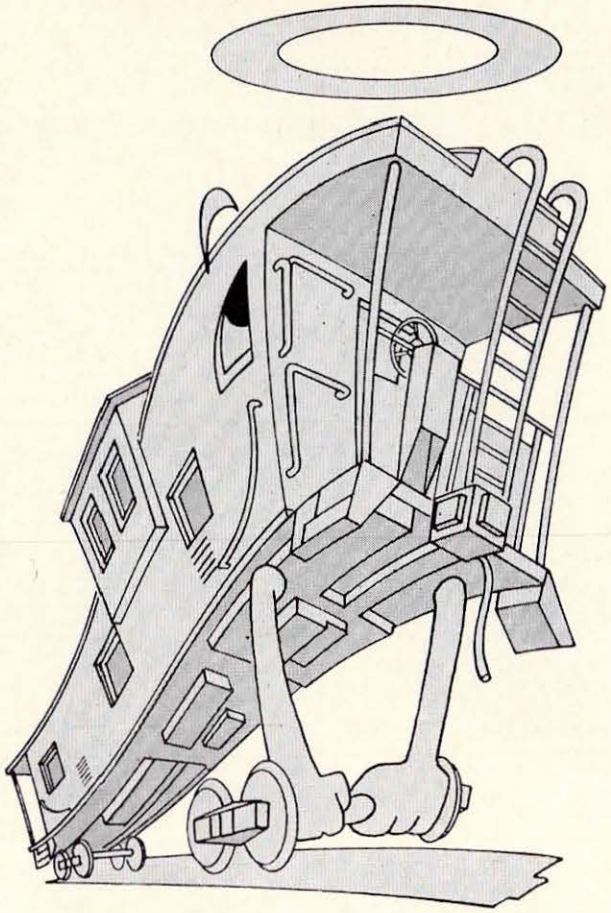
Charles D. McConnell, president of **WABCO South Africa, Ltd.,** has been named vice president and general manager of the new **WABCO** Monorail Division, Pittsburgh, Pa. (RA, Nov. 9, p. 62).

Richard L. Tannehill has been appointed vice president, **Federal Sign & Signal Corp.** and named general manager of its **Western-Cullen Division** at Chicago, succeeding **A. A. Wright,** who will have corporate special assignments

Charles F. Quinn, field engineer, Edison Battery Division, **McGraw-Edison Co.,** has been promoted to assistant district manager, Pittsburgh, Pa.

(Continued on page 59)

International cabooses don't wear halos



They do wear like iron

International Cabooses have a lot of things going for them. Like the fact that 90% of our railroads use them.

But they aren't heaven-sent. They don't have halos. They are sent out of our plant with construction and safety features galore!

Result? Our caboose cars are far from caboose position as sales go. They're where the locomotive is — UP FRONT.

All of which — when you pause to purchase caboose cars — you should give pause for thought.

International Car Co.

835 Englewood Ave./Buffalo, New York 14223

Representatives: M. H. Frank — Cleveland, O. • Prest Company — St. Paul, Minn. • R. B. Hornberger — San Francisco, Cal. • F. E. Ross, Jr. — St. Louis, Mo. • E. J. Hasten, Jr., W. B. Reed — Chicago, Ill.

MEMBER RPI RAILWAY PROGRESS INSTITUTE

Circle 17 on coupon page 53

"Max, why do you think National gives S&H Green Stamps?"

Max, our National Car Rental computer, is a real ladies' man. They love him because he sees to it that they get a gift of S&H Green Stamps every time the man of the house comes home from a business trip.

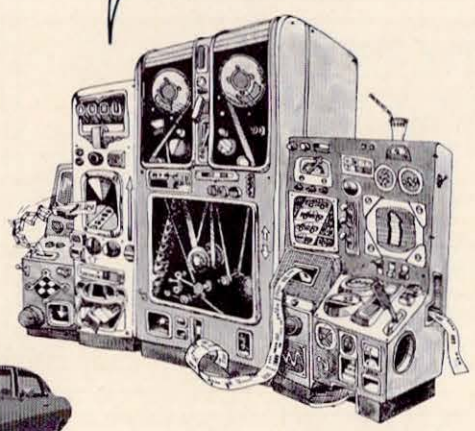
But businessmen like him for other reasons. He's why National is the only car rental company that can *guarantee* car reservations.

Wherever you are, when you dial National's toll-free number (800-328-4567), we just ask Max if there'll be a car waiting for you. Max knows, at the instant you call, what cars are available at every one of National's 2400 world-wide* locations. It's that simple.

Besides guaranteeing reservations, Max keeps up on what people like. That's why National features new Chevys, Pontiacs, Buicks, Oldsmobiles, Cadillacs and other fine cars. If you like S&H Green Stamps and good service, give Max *your* stamp of approval. Only Max can guarantee car reservations, and only National Car Rental has Max. Let Max do it.

*Tilden-Rent-A-Car in Canada

'CAUSE THERE'S A WOMAN BEHIND EVERY GREAT TRAVELING MAN.



NATIONAL CAR RENTAL®

We make the customer No. 1

© Nat-Car-Rent-Co 1970

PC tests a new tamping machine

(Continued from page 25)

from the lining operation, like that from track raising, is transmitted through the truss beam and to the track through the wheels.

● **Light beams are used.** Automatic control of surfacing and lining operations involves the same electro-optic system used on earlier models of Jackson production tampers. Light beams emanating from a front buggy are directed backward to sensors mounted on the rear of the prime mover. Slotted masks at the points of jacking and lining, positioned according to the correction desired in surface and line, direct the light beams to the sensors. They, in turn, operate through the servo system to control lifting and lining operations.

The front buggy is pushed ahead of the machine by a system of tubes furnished in 20-foot lengths. By taking out or adding tubes the distance from the masks to the light beams may be varied from 20 feet to 80 feet for the standard model. The maximum curve that can be worked varies from 15 degrees for a single short coupler to 3½ degrees for three tubes or 80 feet. Additional optional tubes are available to give a maximum length of 140 feet between the masks and the light source.

The greater the distance between the light source and the sensors, the greater the degree of accuracy with which corrections are made. In the System 5000 the degree of accuracy, called the "correction percentage," varies from 43% for the 20-foot distance to 84% for the 140-foot distance.

● **Curves are measured.** When working on curves with the System 5000, the practice is first to measure the ordinates around the curve, including the spirals. These are then plotted on graph paper. This permits a corrected curve to be plotted, giving an average ordinate for the body of the curve. This ordinate is cranked into the machine's control mechanism, so that on the body of the curve the correction of alignment is done automatically.

For the spirals of the curve the ordinates are scaled from the graph and are written on the ties with yellow keel to guide the operator. For the body of the curve, the desired superelevation is put into the track automatically.

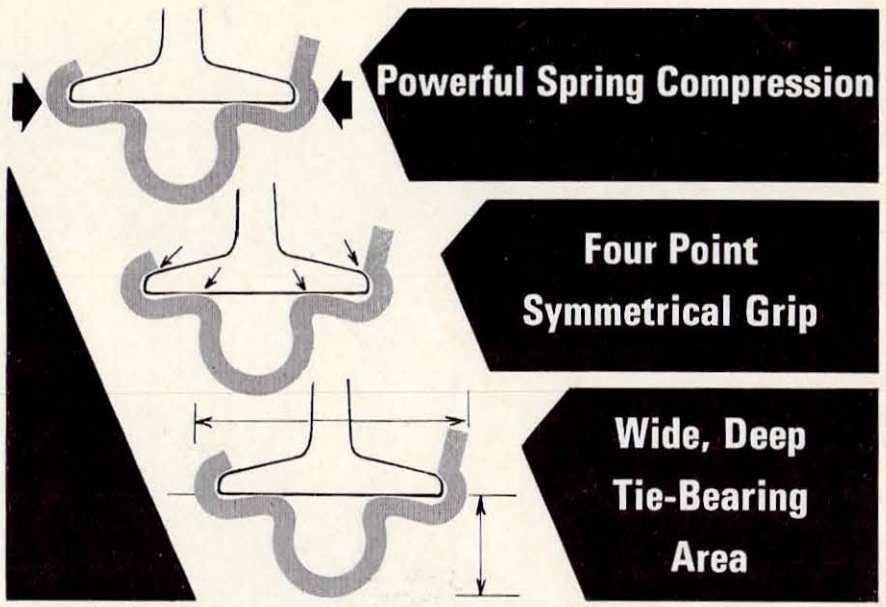
● **How cycling takes place.** In the operation of the System 5000 on tangent track, the cycling of the raising, tamping and lining operations is programmed to take place automatically once the machine has been positioned over a tie. The forward push-button is the only control used.

Toward the end of the lifting, lining and tamping cycle for a particular tie, the operator depresses the forward button. At the end of the cycle the jacking, lining and rail-clamp cylinders are automatically released and the machine starts to move forward.

When the tamping head has been positioned over the next tie, the operator releases the forward button. This causes the machine to stop and automatically to repeat the lifting, lining and tamping cycle.

The manufacturer says that typically the raising, tamping and lining cycle may take place in 3.65 seconds, 1 second for indexing and 2.65 seconds for the work cycle.

Three panel meters, directly in front of the operator, indicate the position of each rail and the track alignment at all times. Each meter has a green band in the center to show the operator that the track is automatically being positioned properly. ■



The extra holding power of

WOODINGS RAIL ANCHORS

gives the reserve you need for welded rail

And that's a proven fact! Tests conducted by railroads and independent laboratories have demonstrated the superior holding power of Woodings Rail Anchors. They give the consistently strong grip that welded rail requires.

Woodings Rail Anchors can be placed quickly and accurately by hand or mechanical means. They have a high reapplication value without reconditioning, cannot be overdriven, can be easily removed and reinstalled, and are self-adjusting to mill variations of rail dimensions.

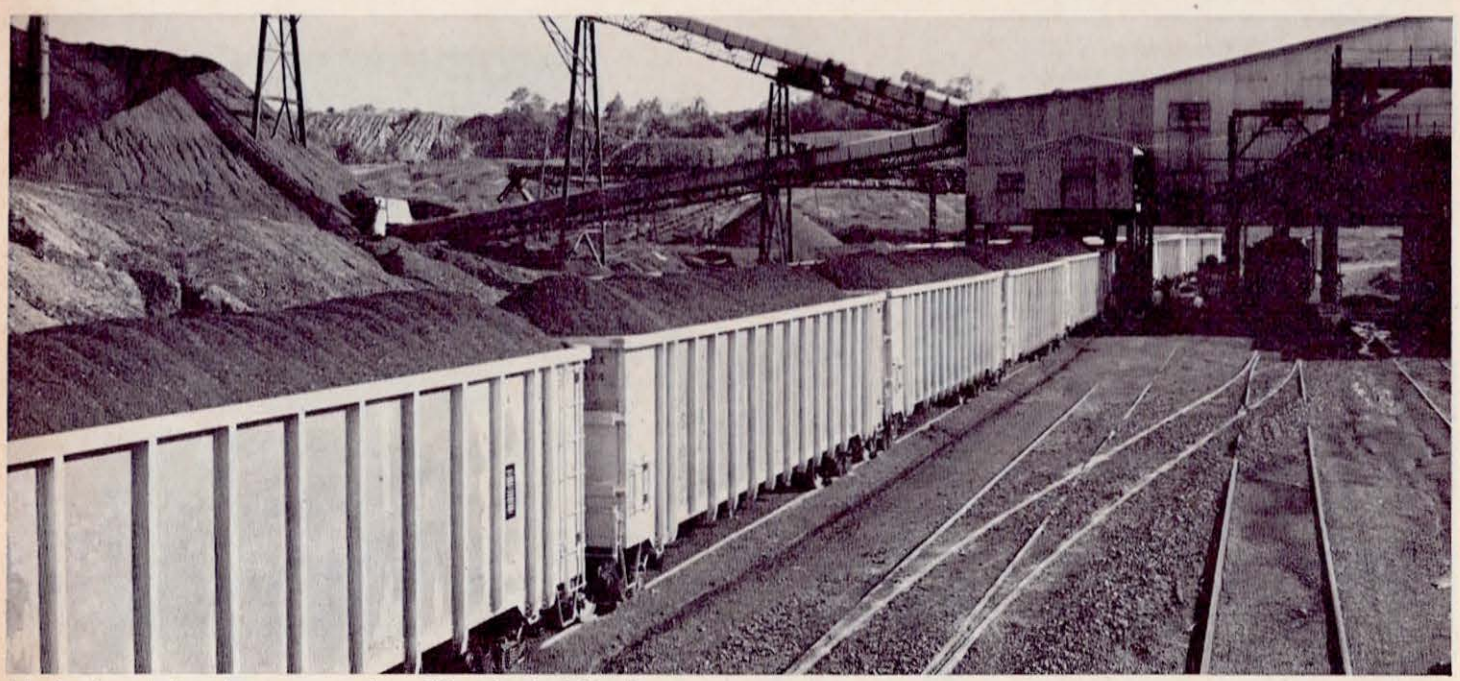
MEMBER RPI

WOODINGS-VERONA TOOL WORKS

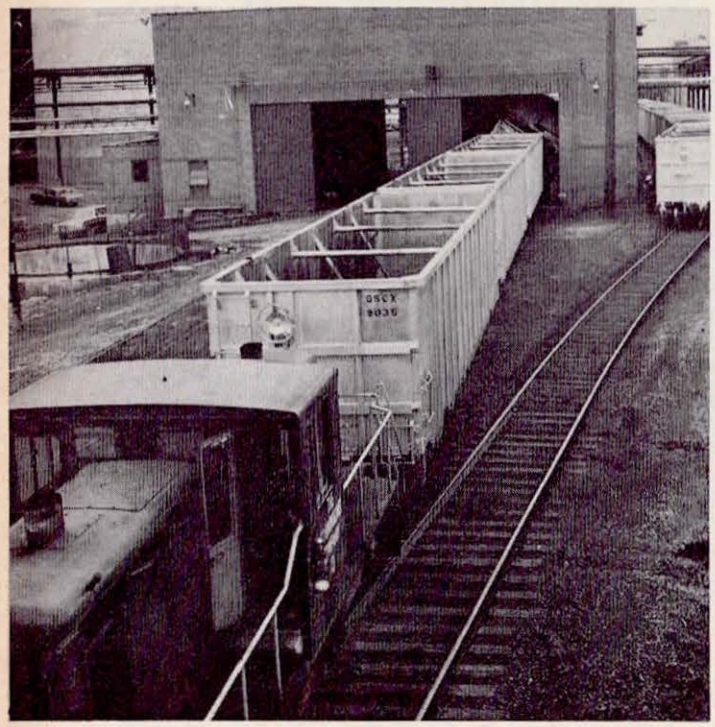
Verona, Pa. 15147

Circle 22 on coupon page 53

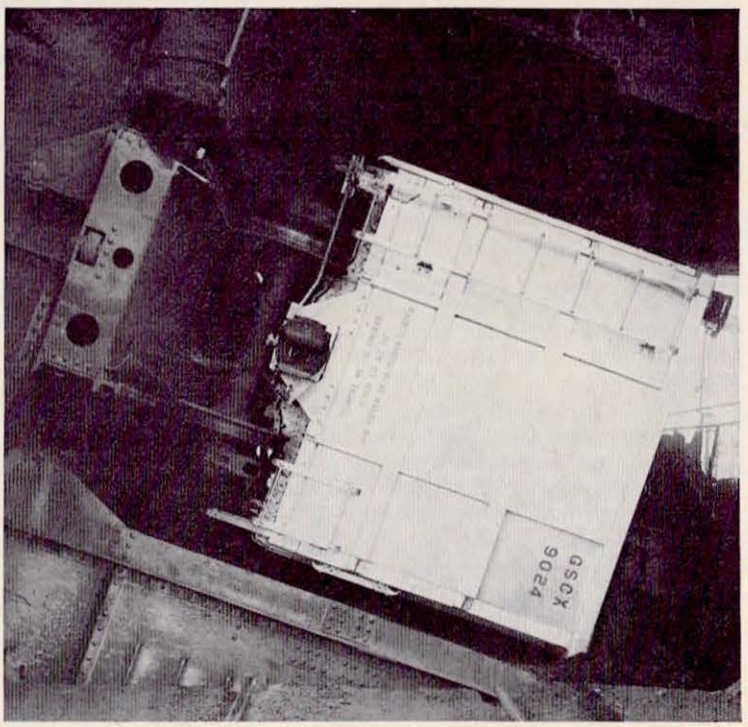
ALL-ALUMINUM TRAIN PART OF UTILITY'S PLAN TO CUT COAL COSTS 50¢ PER TON



All-aluminum train makes-up at southern Ohio mine for 100-mile run to power plant.



Remote-controlled locomotive spots aluminum cars in rotary dumper.



Cars are uncoupled prior to dumping. A scanner will record car weight, car number, load weight and provide copies for utility, railroad and coal producer.

In a move calculated to reduce its coal costs an estimated 50 cents per ton, a major utility has acquired a fleet of 300 aluminum, high-sided gondolas from Greenville Steel Car Company. The cars will also help the utility solve a coal car shortage.

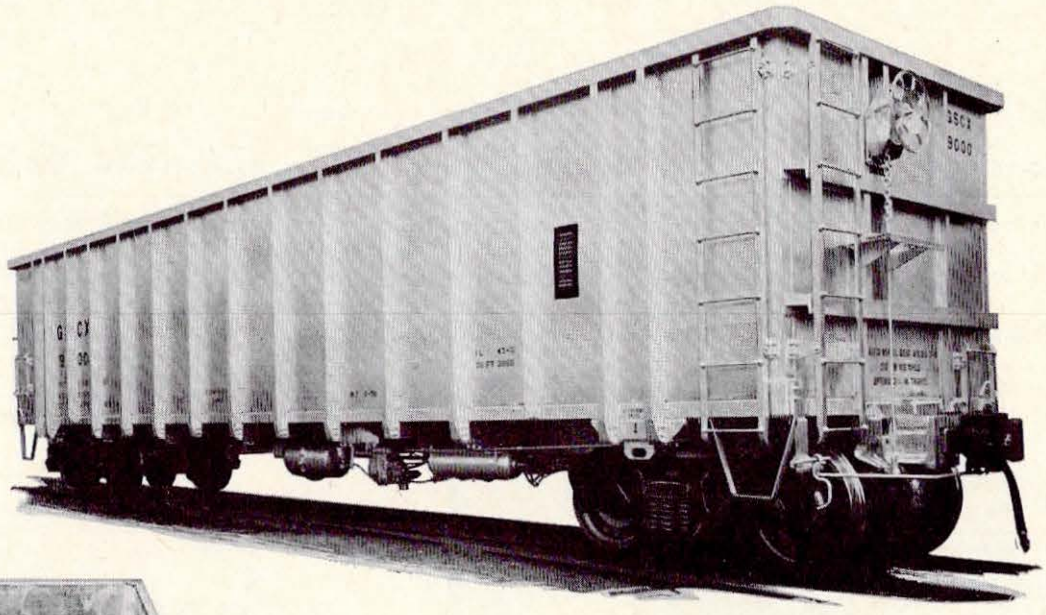
They will operate as unit trains of approximately 119 cars. The remaining cars will be rotated to obtain maximum car life, allow for routine maintenance, and serve as traveling supply cars between the utility's two plants.

The cars combine an aluminum body with a steel underframe to the best advantage of both metals. The aluminum body is attached to the underframe with special fasteners. A protective coating is used between the steel and aluminum surfaces to prevent electrolytic action.

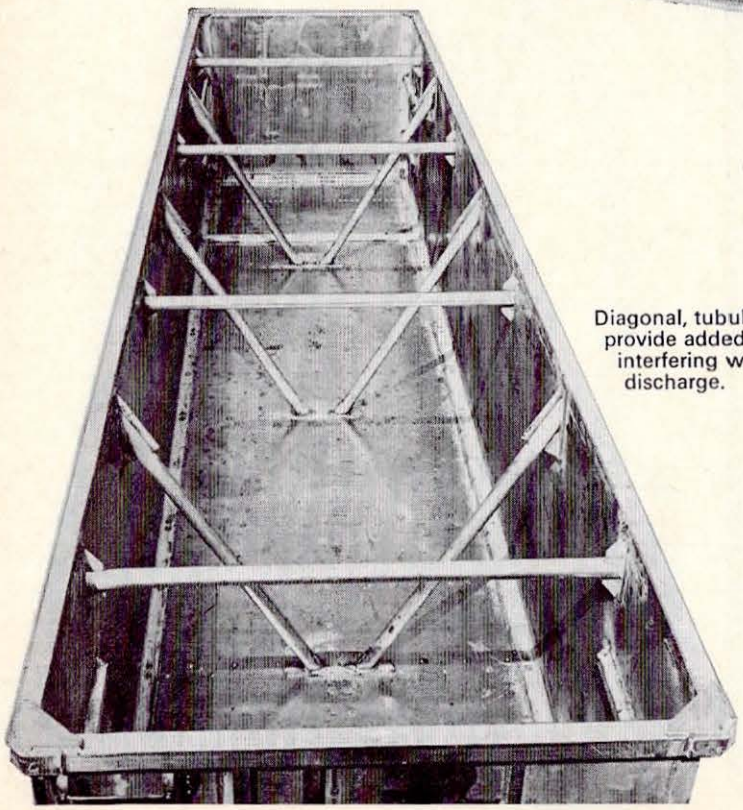
Inside dimensions of the cars are: height 8' 4¾", width 9' 10", length 47' 0". Capacity is 4,250 cubic feet.

The aluminum car is one of many designs placed in service by Greenville. These cars serve many of the nation's leading power and coal producers. If you're concerned with unit coal train service and would like to know more about Greenville's role, write for the Greenville brochure "COAL GOES UNIT TRAIN."

GREENVILLE
STEEL CAR COMPANY
SUBSIDIARY OF PITTSBURGH FORGINGS COMPANY
GREENVILLE, PENNSYLVANIA 16125
PHONE: 412-588-7000



High-sided aluminum gondolas have light weight of 47,000 pounds vs. 63,000 for all-steel car, loading 108 tons against 100 tons in the all-steel design. Cars have a low 80-inch center of gravity but still use basic, standard car design principles.



Diagonal, tubular struts provide added strength without interfering with loading or discharge.

Circle 23 on coupon page 53

This announcement is not an offer to sell or a solicitation of an offer to buy these securities. The offering is made only by the Prospectus.

New Issue

$60,000,000

General American Transportation Corporation

8.60% Equipment Trust Certificates due June 1, 1991

(Series 67)

Price 100%
and accrued interest

Copies of the Prospectus may be obtained in any State only from such of the undersigned and others as may lawfully offer these securities in such State.

Kuhn, Loeb & Co.

Blyth & Co., Inc. — The First Boston Corporation — Smith, Barney & Co. Incorporated — A. G. Becker & Co. Incorporated

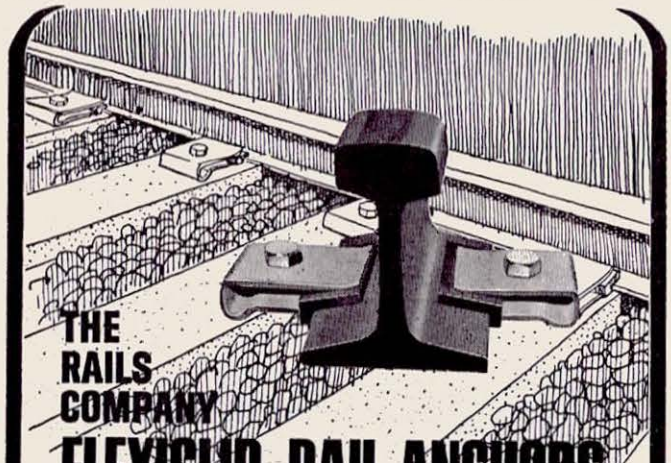
Drexel Harriman Ripley Incorporated — duPont Glore Forgan Incorporated — Eastman Dillon, Union Securities & Co.

Goldman, Sachs & Co. — Halsey, Stuart & Co. Inc. — Hornblower & Weeks-Hemphill, Noyes

Kidder, Peabody & Co. Incorporated — Lazard Frères & Co. — Lehman Brothers Incorporated — Merrill Lynch, Pierce, Fenner & Smith Incorporated

Salomon Brothers — Wertheim & Co. — White, Weld & Co. — Dean Witter & Co. Incorporated — Bache & Co. Incorporated

November 25, 1970



THE RAILS COMPANY

FLEXICLIP® RAIL ANCHORS FOR CONCRETE CROSSTIES

Resist rail movement with positive holding power in ALL directions — Fast installation with regular track maintenance equipment — Jointed or welded rail — Insulated fastenings available — Ideal for high speed transit

Write or call today for descriptive literature

THE RAILS CO.

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In Canada: IEC-Holden Ltd.

Circle 24 on coupon page 53

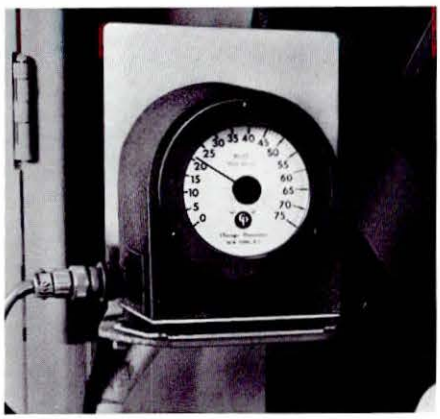
THE

sea view

One of America's truly superior hotels. Private ocean beach and cabanas. Superb cuisine. Modified American or European Plan. Individual rooms and suites. Garage and servants' quarters on premises. Accommodations by advance reservation only. Address inquiries to G. S. Pickard, General Manager.

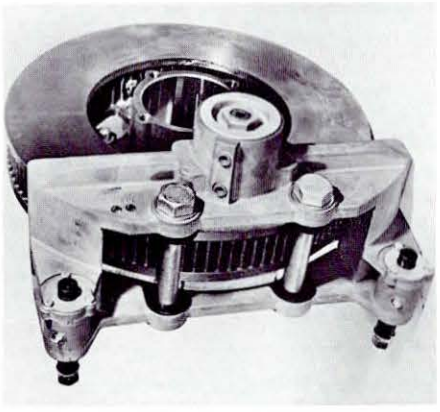
On the Ocean, Bal Harbour
MIAMI BEACH

New Products Report



Speed indicator (RA-1)

The 4½-in. diameter dial of the S/S/E solid state electronic speed indicator has black numerals on translucent white background for clear speed indication. Back-lighting intensity can be easily adjusted by crew to meet specific cab conditions. Flutterless needle indicates actual speed within ±2% of full scale value. Impulse generator produces same powerful signal strength at 5 mph as at 75 mph, assuring steady readings throughout range and "unequalled" accuracy at low speeds. Solid state electronic components are encapsulated for complete production. *Chicago Pneumatic Tool Co.*

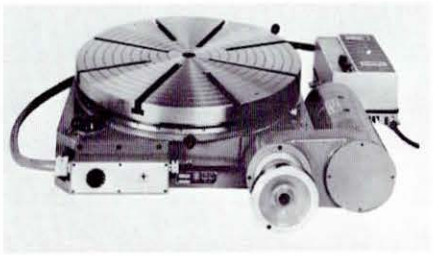


Hydraulic disc brake (RA-2)

The hydraulic disc brake control and foundation brake elements being furnished the San Francisco Bay Area Rapid Transit through Westinghouse Electric and Rohr feature instantaneous response, 90% braking efficiency in anti-wheel slid control and spin control, dynamic brake blending, load-weigh and disc-brake components less than one half the weight of any other railroad disc brake. The cars will have only one disc brake per axle (all other disc-braked cars have had two disc brakes per axle) and, because of braking off the wheel, "can save 180 lb per wheel by using composite (aluminum centered, steel-tired) wheels." *Hurst/Airheart Products, Inc.*

Sanitary items kit (RA-3)

Sanitary items usually supplied engine and train crews are now available in the Kru-Kit, a product which eliminates the need for dispensers on locomotives and cabooses, also the expense of supplying the items at each division point or crew change. For each individual, the kits contain a sufficient supply of disposable hand towels, waterless hand soap, paper cups, toilet tissue, and a plastic litter bag. *Durox Equipment Co.*



Rotary table (RA-4)

A new 25-inch, power-operated rotary table, Model P-25, has a speed variable up to 5 rpm, forward and reverse. The table is powered by a ¾-hp motor operating on 110 volts, single-phase, 60-cycle current.

Among the features of the new model: all ground surfaces; bronze worm-wheel with hardened and ground steel worm running in a bath of oil; precision anti-friction bearings; dual non-influencing locks; graduation in degrees and minutes; adjustments for all moving parts.

Model P-25 can be rotated by hand;

FOR FAST INFORMATION ON 1 to 3 ITEMS ONLY USE THIS
EXPRESS CHECK-OUT CARD
PLACE NUMBER OF ITEM IN CIRCLE
◯ ◯ ◯
AND AIRMAIL DIRECT TO PUBLISHER TODAY

NAME _____ TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____
TELEPHONE _____ 12/14/70

350 Broadway, N.Y., N.Y. 10013 READERS' SERVICE (Att. J. Meyer)

PLEASE SEND ADDITIONAL INFORMATION ABOUT PRODUCTS IN ADVERTISEMENTS NUMBERED: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44

PLEASE SEND INFORMATION ABOUT PRODUCTS MARKED: RA-1 RA-2 RA-3 RA-4 RA-5 RA-6 NL-1 NL-2 NL-3 NL-4 NL-5 NL-6 NL-7

NAME _____ TITLE _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____ 12/14/70
Inquiries can be processed only if title and company are shown.

angular accuracy is guaranteed 60 seconds or less through 360 deg. of rotation. *Troyke Mfg. Co.*

Line printer (RA-5)

The EM-C5 high-speed line printer is available to operate at 1,500 lines per minute providing alpha-numerics in a 48-character set. Using numerics only in a 13-character set, the EM-C5 can print 3,000 lines per minute. The unit has a capacity of 132 or 160 columns with spacing set at 10 columns per inch. Vertical spacing is 6 or 8 lines per inch. Solenoid-operated hammers have sufficient energy to provide excellent print quality for up to 10-part forms. *National Cash Register Co.*

Business Computer (RA-6)

System Ten is a business data processor with on-line file capability that accomplishes multi-programming by hardware. System Ten offers a choice between on-line, real time processing and batch processing by card, disc or tape. The simple, user-oriented workstations go almost anywhere a job requires. The terminals may be placed 2,000 ft from the central processor, with just a two-wire line. System Ten communicates easily with other System Tens or other computer systems via common carrier telephone lines.

System Ten components include: Model 20 processor; model 30 card reader (300 cards per minute); model 35 card punch; model 40 disc drive (up to 10 disc drives provide 100 million characters of storage); model 45 magnetic tape drive; model 50 line printer (450 lines per minute); model 60 paper tape reader (300 characters per second) and model 65 paper tape punch (110 characters per second). Model 70 workstation is a simplified terminal that may be used as a typewriter when it is not communicating with the processor. *The Singer Co., Friden Div.*

NEW LITERATURE

TRANSIT SYSTEMS AND STEEL. The American Iron and Steel Institute has released a color-illustrated brochure demonstrating how construction with steel best meets the aesthetic, functional and economic criteria for any rapid transit system. (NL-1)

CONCRETE CROSSTIES. A new 8-page illustrated brochure describes the TR series prestressed concrete crossties manufactured by the Ben C. Gerwick Co. (NL-2)

TRACK SCALE. Howe Richardson Scale Co.'s bulletin 6853 describes the firm's Accutronic railroad track scales. The scales feature a patented load cell mounting assembly that fully shields the load cell for shock and side load effects, assuring sustained accuracy and long service. (NL-3)

RAILCAR MOVER. Bulletin T-142R, from Whiting Corp., includes complete Specifications, table of performance and dimensions of the firm's 1TM Trackmobile. Trackmobile is the road-to-rail conversion vehicle with the Whiting-designed system for increasing its drawbar pull by assuming part of the railcar load. (NL-4)

HOLLOW EXTRUSIONS. A new brochure by Pultrusions Corp. describes the company's line of custom-made Glaspul fiber glass pull-extrusions. The extrusions cover an assortment of applications ranging from refrigerated cooler doors to ladder and guard rails, including hopper car hatch covers, and from electrical bus conduit to window frames. (NL-5)

CONTAINER HANDLING. The Allis-Chalmers Material Handling Division has published a four-page brochure describing Boss front loading lift trucks for container hanling. The brochure covers the 62,000-lb. FH-620 and the 82,000-lb FH-820, both capable of stacking containers up to 40 feet long three high in all standard stacking patterns. (NL-6)

CRANE OPERATION. The Crane Manufacturers Association of America has published a 12-page Crane Operator's Manual. The booklet, stressing safety, describes the proper way to operate a crane and explains why it should be operated in that manner. (NL-7)

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Market Outlook

CARLOADINGS

Loadings of revenue freight in the week ended Nov. 28 totaled 444,408 cars. This was a decrease of 18.7% below the previous week and 14.0% below the corresponding week last year. Ton-miles generated by carloadings in the week ended Nov. 28 are estimated at 12.5 billion, a decrease of 12.0% below the corresponding week of 1969. Both weeks included the Thanksgiving Day holiday.

REVENUE FREIGHT CARLOADINGS

Commodity	Nov. 28 week	Nov. 21 week
Grain	25,217	34,232
Farm products	23,002	27,481
Metallic ores	23,808	29,628
Coal	91,439	114,511
Crushed stone, gravel & Sand	22,425	30,336
Nonmetallic minerals	7,859	9,683
Grain mill products	17,026	20,293
Food & kindred products	22,132	26,624
Primary forest products	20,049	24,381
Lumber & wood products (except furniture)	11,834	15,596
Pulp, paper & allied products	20,950	22,943
Chemicals & allied products	22,446	28,203
Petroleum products	9,191	10,762
Stone, clay & glass products	14,799	18,968
Coke	8,182	9,562
Metals & products	20,288	23,063
Motor vehicles & equipment	12,176	13,038
Waste & scrap materials	11,002	13,348
Forwarder & shipper assn. traffic	5,198	6,383
All other carloads	54,903	67,195
LCL traffic	482	666
Total cars loaded	444,408	546,896

CUMULATIVE TOTAL, 48 weeks	1970	1969	1968
	25,273,989	26,208,735	26,273,723
Estimated revenue ton-miles (billions) 48 weeks	707.7	711.9	692.1

PIGGYBACK CARLOADINGS

U.S. piggyback loadings for the week ended Nov. 21 totaled 25,496 cars (5.4% below the corresponding week last year), and 40,373 trailers or containers (down 7.5% from 1969). Cumulative volume for the first 47 weeks of 1970 is 1,160,897 cars (5.3% below the 1969 total), and 1,908,421 trailers or containers (down 5.5% from 1969).

IN CANADA

	Revenue Cars Loaded	Cumulative Totals
Nov. 21, 1970	80,139	3,478,942
Nov. 21, 1969	77,988	3,264,013

TRANSIT

● *Southeastern Pennsylvania Transportation Authority.*—Acquired a rail-grinding unit from Frank Speno Co. of Ithaca, N.Y., at a cost of $248,000. The unit consists of a power-and-control car, four small buggies, each with six grinding wheels, and a tank car for water that is sprayed on the grinding area. Grinding wheels are mounted on adjustable vertical shafts, making the unit adaptable to the varying track gauges of the Market-Frankford-Subway-Elevated, the Broad Street Subway, and the rail lines of SEPTA's Red Arrow Division.

● *Toronto Transit Commission.*—Awarded a $5-million contract to the Uniswitch Division of WABCO for a 3-part signal system. The contract covers manufacture and installation of the signal system for the 5.5-mile extension to TTC's Yonge subway extension, improvements to the existing signal system on the Yonge subway line and the conversion of the present manual emergency crossover at Bloor Station to electrical remote control operation.

CAPITAL EXPENDITURES

● *Chesapeake & Ohio/Baltimore & Ohio.*—Equipment authorizations for 1971 so far total $83.9 million. C&O has just ordered 2,000 100-ton coal hopper cars from Bethlehem Steel at a cost of $27 million. Delivery will start in January and be completed in April. Delivery also will start in January of 2,100 100-ton coal hopper cars being built at C&O's Raceland, Ky., Car Shops at a cost of $26 million (RA, Oct. 26, p. 97). As a result of these orders, 2,100 coal cars will join C&O's fleet and 2,000 will join B&O's fleet. In addition, C&O will purchase 35 four-axle, high-power diesel locomotives costing $9 million, and C&O/B&O will acquire 86 cabooses from International Car Co. at a cost of $2.4 million (75 cabooses are for B&O and 11 are for C&O). B&O also will buy 65 diesel locomotives costing $17 million, and 104 60-ft, high-roof box cars costing $2.5 million. Orders for the box cars and locomotives have not yet been placed.

FREIGHT-TRAIN CARS

● *Canadian National.*—Ordered 400 newsprint box cars from National Steel Car Corp. at a cost of $7.5 million. Delivery of the cars, to be equipped with cushioned underframes, is scheduled to begin next April and be completed by the end of July.

● *Denver & Rio Grande Western.*—Will acquire 615 new freight cars valued at more than $11 million in 1971. Rio Grande will lease 250 50-ft, 70-ton box cars equipped with cushion underframes and wide doors; 200 of these cars will have heavy-duty mechanical load-restraining devices and 50 will have pneumatic bulkheads. Rio Grande also will acquire 250 100-ton open-top hopper cars; 100 4,750-cu-ft-capacity covered hopper cars; and 15 Airslide covered hoppers.

● *Trailer Train.*—Ordered 312 cars, as follows: From the Amcar Division of ACF—100 all-purpose cars; from Bethlehem Steel—72 standard-level and 45 100-ton-capacity cars; from Pullman-Standard—15 container and 80 low-level cars. The 100-ton-capacity cars will be 68 ft long; all the others will be 89 ft, 4 in. long. Since Jan. 1 TTX has acquired 3,839 new cars. As of Nov. 30, TTX had 58,566 cars in service or on order.

● *Orders and deliveries.*—Orders were placed for 3,053 new freight cars in October, compared with 2,073 in the preceding month and 3,782 in October 1969. New cars on order and undelivered on Nov. 1 totaled 20,049, compared with 21,672 on Oct. 1, 1969.

FREIGHT-TRAIN CARS ORDERED AND DELIVERED IN OCTOBER AND BACKLOG OF ORDERS

DELIVERED

	Oct. 1970	Sept. 1970	Oct. 1969
Built new by car builders	3,787	4,922	5,181
Built new in R.R. shops	888	1,225	1,791
Built new—total	4,675	6,147	6,972
Rebuilt	1,244	924	631
TOTAL DELIVERED	**5,919**	**7,071**	**7,603**

ORDERED

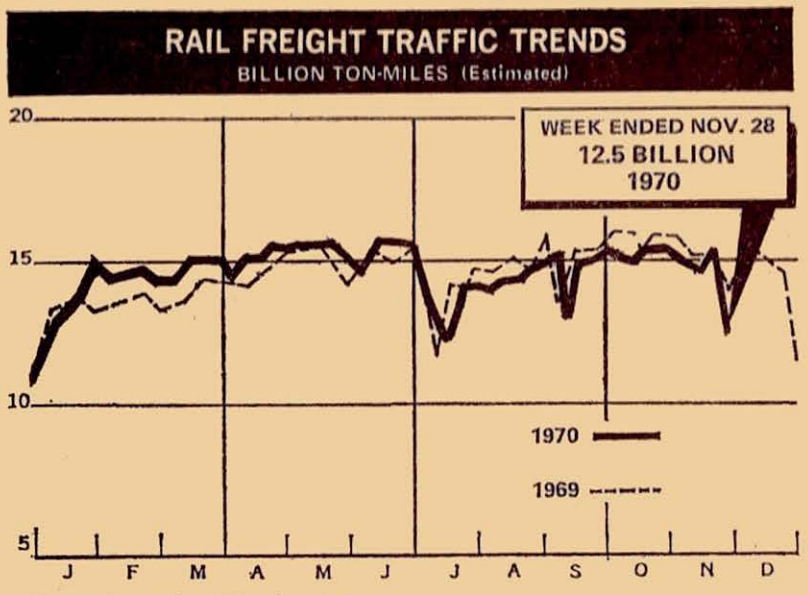
To be built new by car builders	2,516	1,726	3,148
To be built new in R.R. shops	537	347	634
To be built new—total	3,053	2,073	3,782
To be rebuilt	418	216	590
TOTAL ORDERED	**3,471**	**2,289**	**4,372**

ON ORDER AND UNDELIVERED

	Nov. 1, 1970	Oct. 1, 1970	Nov. 1, 1969
To be built new by car builders	16,349	17,621	36,920
To be built new in R.R. shops	3,700	4,051	5,123
To be built new—total	20,049	21,672	42,043
To be rebuilt	3,589	4,415	4,364
TOTAL ON ORDER	**23,638**	**26,087**	**46,407**

● *September bad order ratio 0.3% higher than 1969.*—Class I roads on Sept. 1, 1970, owned 1,433,424 freight cars, 8,213 fewer than on Sept. 1, 1969, according to AAR report summarized below. Bad order ratio was 0.3% higher than on Sept. 1, 1969.

	Sept. 1, 1970	Sept. 1, 1969	Change
Car ownership	1,433,424	1,441,637	−8,213
Waiting repair	82,586	78,814	+3,772
Repair ratio	5.8%	5.5%	+0.3%



Source: Association of American Railroads

NEW ORDERS FOR MACHINE TOOLS*

	October 1970 ($000)	October 1969 ($000)	10 mos. 1970 ($000)	10 mos. 1969 ($000)
Metal cutting tools	35,350	89,000	581,250	1,033,550
Metal forming tools	35,250	45,000	218,550	475,300

MACHINE TOOL SHIPMENTS*

	October 1970 ($000)	October 1969 ($000)	10 mos. 1970 ($000)	10 mos. 1969 ($000)
Metal cutting tools	71,200	104,600	851,750	982,100
Metal forming tools	36,400	43,200	380,250	332,300

*Including foreign and domestic.
Source: National Machine Tool Builders' Association.

Viewpoint

RAILPAX: Three points

(I) TOO LITTLE, TOO LATE?

Tom Wicker, Associate Editor of the New York Times, in his column December 1 describes RAILPAX as "a small, shaky start on redeeming intercity rail passenger service from the limbo into which American railroads and national policy have cast it." He is one of the first of a long line who will be criticizing gaps in the proposed RAILPAX network. But mainly he points out that the Congress and the Administration have taken a niggardly approach, in "stark and utterly senseless contrast" to further investments in the SST and a proposed $17.3 billion to complete the Interstate Highway System.

On the same page the same day James J. Harford, executive secretary of the American Institute of Aeronautics and Astronautics, makes a plea for support of the SST. He makes a point that if he thought the money and 20,000 engineers and technicians needed to continue the SST program were transferable to technological programs in, for one, mass transit, he would think hard about approving the $290 million. Mr. Wicker could show Mr. Harford where it is easily transferable. High point of Wicker's column is that "since it takes only a fourth as much thrust to move a railway car on steel rails as it does to move a rubber-tired vehicle on concrete, a modern train requires only about fifteen relatively pollution-free horsepower per passenger to perhaps ten times that for a pollution-belching auto." If we can ease transportation problems and pollution at the same time, isn't there a better place for those SST dollars and technicians?

(II) IS THE EMPHASIS WRONG?

It will take a lot of speeding up, cleaning up, track repair and other enticements to get regular travelers off an evening jet flight and on to a sleeping car train. Yet of the 16 city pairs suggested for the Railpax network 10 represent this kind of service. One example: New York-New Orleans—where one train with one sleeper operating thrice weekly now meets transportation needs. Many true corridors, such as Seattle-Portland; Los Angeles-San Diego; Cleveland-Pittsburgh, are not included. Not these specific runs, necessarily, but these kinds of runs, a little long for bus and a little short for air, where the railroad fulfills its superior downtown-to-downtown role within time spans that make the service viable. And these services can relieve overtaxed airports.

It is not this publication's intent to suggest specific services that ought to be operated; only to question the value of the long overnight runs as against the more viable intercity corridor services that will constitute the RAILPAX network.

(III) HOW ABOUT AN AMRAILPASS?

No matter what final network is chosen, if the will of Congress is fulfilled, there will be some kind of basic, attractive intercity passenger service in the United States. So why not sell it to our national advantage? Why not start to develop and promote an AMRAILPASS that will make it attractive for overseas visitors to go between our principal cities by land, and see America? It could be an important source of revenue for RAILPAX and the problems in revenue split that have obtained up to now would no longer present an obstacle. *—Robert G. Lewis*

(Continued from page 47)

PennFore, Inc., Bristol, Pa., an affiliate of **Pennsylvania Pacific Corp.,** has announced appointment of **Ellcon National Inc.** as representative for sales and distribution of PennFore products manufactured for the railroad and rapid transportation industry.

Gerard M. Corbeil has been promoted to product manager, railway, **National Electric Coil Division, McGraw Edison Co.,** Columbus, Ohio. Mr. Corbeil had been sales engineer in the mid and southern Ohio areas, as well as parts of West Virginia and Kentucky, since May 1968.

Frank E. McCreery has been elected president, **Rohr Corp.,** Chula Vista, Calif., succeeding **Burt F. Raynes,** chairman and chief executive officer. Mr. McCreery had been executive vice president.

TRANSIT

Walter Gold, Washington newspaper reporter and television correspondent, has been appointed director of public information, **Urban Mass Transportation Administration, U.S. Department of Transportation,** Washington, D.C.

Lawrence D. Dahms, director of planning and research, **San Francisco Bay Area Rapid Transit District,** has been appointed assistant general manager—planning and public service, a newly created post. **Phillip O. Ormsbee,** information officer, has been named administrative assistant to the general manager.

The Kansas City Area Transportation Authority has moved from the Board of Trade Building to Room 900 Davidson Building, 1627 Main Street, Kansas City, Mo. 64108

Morris J. Dillard has joined the **Metropolitan Atlanta Rapid Transit Authority** as community relations director. Mr. Dillard was formerly labor affairs representative, Southern regional office, **National Urban League,** Atlanta, Ga.

William B. Schwartz, Jr., Atlanta real estate investor, has been appointed a member of MARTA.

Salvatore R. Felice has been appointed assistant superintendent of purchasing, **Cleveland Transit System.** He was previously employed by CTS in the Schedule, Accident and Research & Planning Departments.

Edmund A. Duszak, assistant general superintendent, **Port Authority Trans-Hudson Corp.,** New York, has been appointed general superintendent, **Staten Island Rapid Transit Operating Authority,** a subsidiary of the **Metropolitan Transportation Authority.**

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Circle 12 on coupon page 53

OBITUARY

H. B. Bolander, 82, retired director of research, **Simmons-Boardman Publishing Corp.,** New York, died Nov. 7.

John J. Emerick, coal traffic manager, **Jersey Central,** Newark, N.J., died Nov. 22.

James J. Landrigan, 76, retired assistant to the general freight traffic manager, **Milwaukee,** died Nov. 23.

L. S. Pepperdine, retired supervisor of loading, Mechanical Division, **Association of American Railroads,** Chicago, died Nov. 30 at Calumet City, Ill.

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The Railway Age

1971 YEARBOOK

Issue date: January 25, 1971.
Advertising closing date: January 11.

$26 million for EL push-pull

(Continued from page 24)

cars are basically alike on the outside, there are notable differences inside. The carpeted trailer cars, of course, have the greater seating capacity—108 passengers, with the cab cars next in line, with seats for 104. The bar trailers, which have snack and cocktail facilities, can seat 96 riders.

The blue-and-gray locomotives which power the EL trains combine performance-proved systems and components of GE's standard line with new technology suited to the special requirements of commuter service. The 3,430-hp, 16-cylinder GE engine supplies power for traction and all the electric lighting, heating and air conditioning power for the cars. This engine drives both the standard traction alternator and a 500-kw three-phase auxiliary alternator. By eliminating a separate diesel-alternator set, as used on locomotives for other push-pull services, the U34CH achieves greater efficiency and reliability, while reducing the maintenance requirements.

In commuter service, the diesel maintains a constant engine speed of 960 rpm from idle through full throttle positions. The power can be distributed as 3,000 hp for traction and 300 kw to the auxiliary alternator or 2,700 hp for traction and a maximum of 500 kw to the auxiliary. Demand of the car power system has first call on the engine output.

In freight service the diesel engine speed can be reduced to 450 rpm in idle and go to the full 960 rpm in full throttle. Horsepower and load rate for each throttle notch are set by excitation to correspond with conventional freight locomotive operating conditions. As with its present commuter locomotive fleet, EL plans to use the 23 U34CH units in freight service during weekends and at other off-peak periods. Selection of the various modes of operation—freight, suburban, standby and starting—is controlled by a switch on the engine control panel on the back wall of the cab.

The diesel engine features GE's new steel-crown piston. The alternator provides shuntless traction motor operation, minimizing control equipment and reducing the potential for traction motor flashover. The six-motor locomotives have GE's three-axle floating-bolster trucks.

Over-all length of the locomotive is 67 ft. 3 in.; weight is 392,000 lb. The 81:22 gear ratio gives a maximum speed of 80 mph. Fuel capacity is 4,000 gallons. ■

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VIEW FROM THE STREET

ASTRO—and priorities

The ASTRO Report, discussed at length in the Nov. 30 issue of Railway Age, is by any standard the best effort the AAR and the industry has ever made in presenting its case. Unlike previous efforts, which dealt only in generalities (the Four Freedoms, etc) and which thus took much effort to hammer into usable legislative proposals, the ASTRO Report neatly summarized each section with action proposals readily translatable into legislation. By breaking down the material into usable chunks its authors appear to have greatly enhanced the chance of getting considerably more than the usual half-a-loaf. A second very helpful feature is the relatively low-keyed, non-controversial language used to argue the case; this should damp down the intensity of the opposition which is bound to arise. The highly visible nature of the Penn Central crisis has helped make the public receptive to "doing something about the railroad problem"; the ASTRO Report provides timely instructions as to what action should be taken.

Given the fact that the industry as a whole is in an uncomfortably tight earnings and financial position, the overriding question must be that of obtaining approval of those parts of the ASTRO package which have the greatest financial benefits and/or which are the easiest to push through the Congress. In short, priorities must be set. From the point of view of the financial analyst, five items which meet the criteria just mentioned stand out.*

1) *Equalization and ultimate abolition of property taxes.*

As a fixed charge, set largely by political pressures, property taxes are one of the most difficult areas for management to control. Elimination of unfair assessments would have increased 1969 pretax ordinary income by 15% or so; abolition by roughly 63%. The abolition, with offsetting Federal grants to the affected local government units, dovetails neatly into President Nixon's revenue sharing program. Urgent action is indicated to get this idea included in his pending budget message.

2) *Authorization for automatic rate adjustments.*

The single most serious problem the industry has faced is its inability to obtain rate relief on a timely basis in small increments, making inevitable massive rate filings which generate unnecessary friction with shippers. Since cost-of-living concepts are widely understood and accepted, this phrase should be used to explain the concept; automatic semi-annual upward (or downward) adjustments should be sought. This critical issue should not be tied to that of preempting state rate regulation authority which would be merely nice to have. The latter proposal will stir up a hornet's nest of opposition; the marginal benefits which might be gained are not worth fighting for if it would jeopardize cost-of-living rate adjustment authority.

3) *Reinstatement of the investment credit for locomotive and equipment purchases.*

This is a key item. Many parts of the accounting and financial community do not understand the principles and effects of rapid amortization tax treatment at variance from that accorded other industrial and service corporations. Investment credits, on the other hand, are easy to understand and clear rules for accounting treatment have been established. It follows that (contrary to the ASTRO proposal) investment credits, not rapid amortization, should also be sought for new right-of-way and yard investment.

4) *Greater rate freedom must be obtained.*

Two ASTRO items deal with rate freedom—one involves obtaining statutory authority for rate reductions if profits are increased, and the other involves experimental elimination of minimum rates on certain items. Both proposals are terribly important and deserve the highest priority treatment; maximizing rail profits by intelligent pricing policy would probably have more direct impact on earnings than any other single item. While some considerable improvement can be made within the existing legal framework, the minimum rate proposals are essential to future progress.

5) *Time limits on ICC actions, and on appeals therefrom.*

The cumbersome procedures now required by the Interstate Commerce Act stand out as a major cause of misallocating management time and effort. Absolutely statutory limits, much shorter than the present statutory administrative rules, must be instituted, and similar rules should be established for Court appeals. Such shorter mandatory limits would reduce legal costs enormously, cut management time spent on nonproductive tasks, and help shippers make timely and rational traffic allocation decisions.

More education needed

A good start has been made in publicizing the ASTRO report, with the full support of labor and suppliers. However, the financial community, beset with woes of its own, has not yet provided meaningful support, nor has the public been adequately educated. Then, too, the short-term goal of obtaining some sort of Federal loan guarantees to assist roads already in receivership—a controversial proposal not directly contemplated in the ASTRO report—has tied up much of the industry's legislative liaison staff. Such guarantees, unless integrated with the broader framework of the ASTRO program, are at best only short-term palliatives.

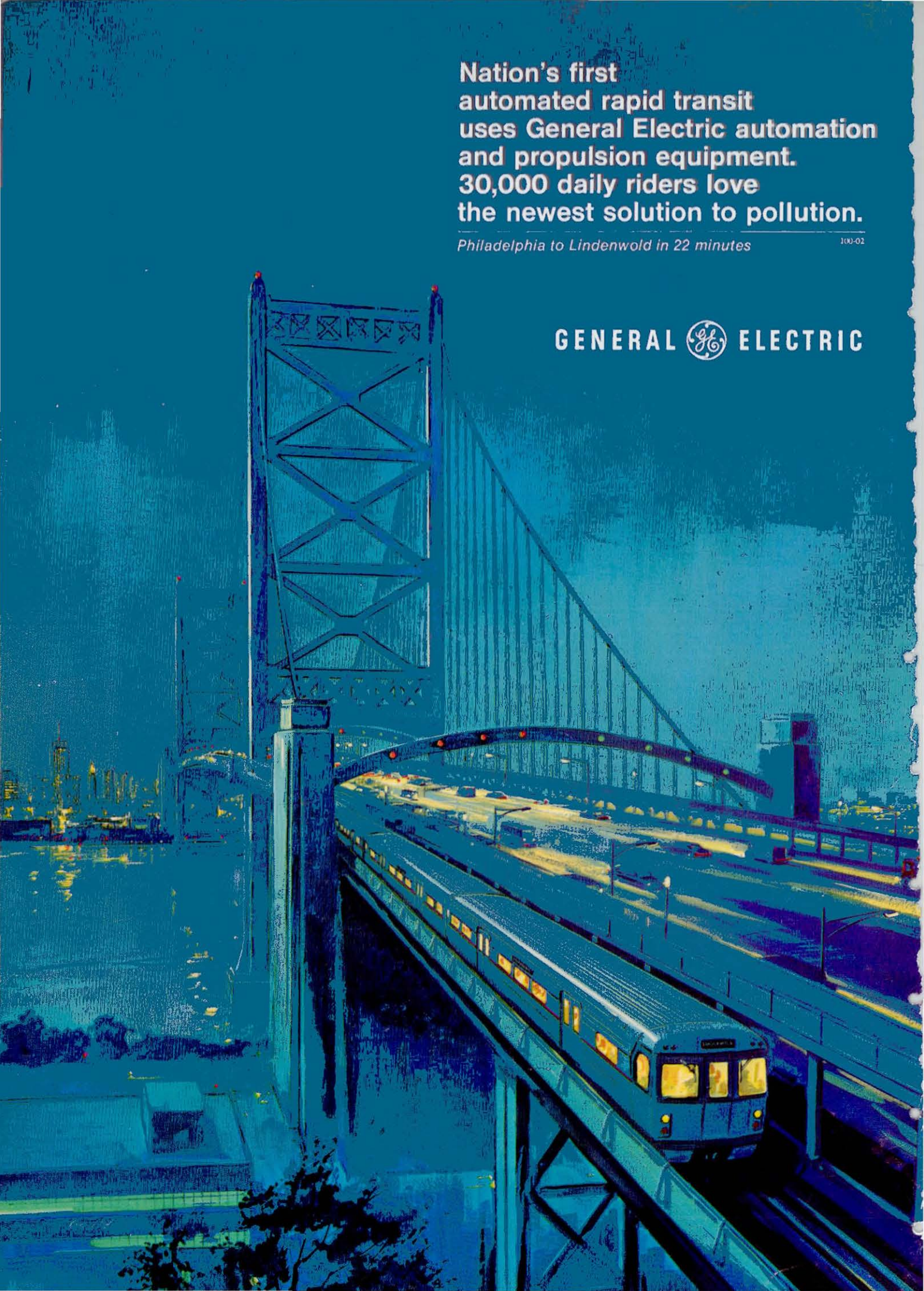
Another disappointment has been the reluctance—to judge from press reports—of shippers to campaign actively for any part of the ASTRO program not directly related to direct increases in new car purchases. When one analyzes the amount of new capital which has been committed to new car purchases over the past decade, and the very poor return on that investment, it rapidly becomes apparent that what is needed is not more dollars for expanding the car fleet but rather more effective use of what is already in hand. The other part of the ASTRO program, especially the ones mentioned above, would help to do just that.

The foregoing reservations are only quibbles; any progress which is made is all to the good. The Passenger Service Act may not be exactly what the industry wanted, but it can live with it; in a sense, the passage of the Act was the first victory for the ASTRO team. But it is important to concentrate on the really critical items, and not to scatter the effort over too many projects, particularly those of only marginal or short-term benefit.

*Passenger service items omitted; that is now past history.

May Christmas last forever!

MEMBER RPI Kerite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